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Saudi Commission for Health Specialties

Restorative Dentistry Board



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Finally, we acknowledge and extend our gratitude to the Royal College of Physicians and Surgeons of Canada for allowing us to benefit from their expertise in designing a competency-based curriculum. On behalf of the Saudi Board in Restorative Dentistry, it is a pleasure to be able to utilize and implement the CanMEDS 2015 competency framework.

INTRODUCTION

Foreword

Nowadays, medical and dental schools and institutions are experiencing a variety of challenges in medical education, which stem from the health care needs of the society, the patient's expectations of high-quality and safe care, new generations of students, a well-developed health care environment, and new approaches to medical education. To face these important challenges, postgraduate medical training programs need to modify their practices by implementing a well-structured and innovative curriculum. Recognizing the growing demand for this comprehensive, explicit, and innovative health training curriculum, the SCFHS has adopted the CanMEDS 2015 framework as a medical education guide in terms of the essential competencies that residents need for improved patient care and set up the core curriculum of all training programs, including the SBRD. CanMEDS is an innovative, competency-based framework that involves the implementation of outcomes-driven education and assessment to ensure that physicians and dentists have the knowledge, skills, and attitudes they need for every stage and role in their career. The framework is based on seven roles that all physicians and dentists need to embody in order to meet the needs of the society: medical expert, communicator, collaborator, leader, health advocate, scholar, and professional. This framework will provide a more personalized learning experience for residents, who can expect to develop into self-directed and lifelong learners and provide effective care during their future practice.

The development of this curriculum was a dynamic, interactive process that started with the selection of curriculum development committee members who were qualified medical educators. After reviewing the old curriculum and conducting several formal and informal interviews with the program stakeholders, including a resident representative, as well as conducting



meetings with curriculum advisory members, the needs were assessed and the goals, objectives, contents, educational strategies, and assessment methods of the curriculum were set according to a curriculum template recommended by the SCFHS, integrating the CanMEDS framework. Finally, the curriculum's first version was submitted to the SBRD Scientific Committee for approval.

The curriculum is intended to be used by SBRD program stakeholders, including educators, program directors, teachers, trainees, and researchers, as a guide to learning, training, educational strategy, assessment, and certification.

To implement the curriculum successfully and help it achieve its potential, the curriculum developers must ensure that sufficient resources, financial support, faculty development programs, and administrative strategies have been developed. These require collaborative work and support from the SCFHS, program-supervising committees, training centers, program directors, and contributing tutors or supervisors.

The periodic formative and summative program evaluation should be conducted by the SBRD Scientific Council to allow for future refinement and continuous quality improvement of the curriculum.

Finally, in reference to the decree no. 2019003517 issued on 21/9/1440 H by the Executive Council for Education and Training that stated amendment of the SBRD program's duration from 4 years to 3 years, and according to the recent decree no. 2021000512 issued on 28/6/1442 H, the present updated version (2021) was reviewed and published.

Definition

SBRD is a program designed to provide didactic, clinical, and hospital training to upgrade the standards of the dental profession in Saudi Arabia. The instructions and experiences provided in the SBRD can prepare residents to be highly qualified restorative dentists who are able to treat restorative cases which include Operative and Fixed Prosthodontics treatment modalities.

History

The prevalence of dental caries is on the rise in a number of nations around the world. The adult Saudi population has demonstrated a higher prevalence and greater severity of caries and secular trends over the past decades. This alarming dental public health problem warrants the immediate attention of the government and officials in the dental profession.

Unfortunately, current estimates indicate that the World Health Organization 2000 goals are still unmet for Saudi Arabia. Thus, it has been critical to implicate a program tailored specifically to meet that goal in addition to the specific demands of the Saudi population, including identifying intervention targets and improving oral health. From here, the concept of the SBRD was developed in an effort to prepare qualified restorative specialists to outline and execute a treatment plan for the prevention and control of dental diseases, along with dental rehabilitation and maintenance.

The program is the brainchild of Professor Abdullah R. Al-Shammery and was officially launched in October 1999. The inaugural SBRD commenced with ten residents in the three major training centers, i.e., King Saud University in Riyadh, King Abdul-Aziz University in Jeddah, and Dammam Ministry of Health Dental Center, with a single Regional Training Committee, and Professor Al-Shammery as the first chairman of the SBRD Scientific Committee.

Vision

Global leadership in medical education, training, and community services in the field of restorative dentistry to achieve the vision of Saudi Arabia 2030.

Mission

Building promising competencies with a lifelong ability to learn and provide a human-centered care in the field of restorative dentistry, using the latest technology and evidence-based knowledge.

Values

- Professionalism.
- Quality.



- Patient safety.
- Human-centered care.
- Cooperation.
- Transparency.
- Empathy.

Goals

The goals of the SBRD are: to supply the community with qualified dental restorative specialists; to provide a designated training program for dental restorative specialists and related professions; to maintain an environment of excellence for residents and apply the measures required for academic success as well as clinical achievement; to offer the advanced techniques and modern technology required for oral health research and other related scientific endeavors, and to provide consulting dental restorative services for local as well as international agencies.

Rationale and educational objectives of the program

As a restorative dentistry program, SBRD aims to train and graduate competent and knowledgeable specialists in restorative dentistry (operative dentistry, fixed prosthodontics, and esthetics) that are capable of functioning independently to provide an educational environment that promotes a high standard of delivery of health care. Specifically, the Saudi Specialty Certificate in Restorative Dentistry (SSC-[Dent]) program prepares residents to:

Plan and provide both routine and complex restorative dental care for a wide variety of patients by applying advanced knowledge and clinical skills.

Acquire competence and confidence in the various restorative clinical disciplines (operative dentistry, fixed prosthodontics, and implantology) that are integral components of restorative dentistry.

Reinforce the ability to make judgments in arriving at a diagnosis, planning treatment, and assessing treatment outcomes.

Keep abreast of modern technology, digital dentistry, and practice management.

Communicate, understand, and function effectively with other health care professionals and understand the setting of their organizational system.

acquire experience in teaching and research to upgrade clinical knowledge.

At the end of this program, the resident will have acquired the following competencies and can function effectively in these roles as per CanMEDS framework competencies:

- Dental expert
- Communicator
- Collaborator
- Leader
- Health advocate
- Scholar
- Professional

General training requirements

- Admission into the program is in accordance with the commission training rules and regulations.
- Trainees shall abide by the training regulations and obligations established by the SCFHS, and that of the training center.
- Training is a full-time commitment. Residents shall be enrolled in full-time, continuous education for the entire duration of the program.
- Training is to be conducted in institutions accredited by the SCHS.
- Training shall be comprehensive and in fulfillment of promotion requirements and comprehensive patient management.
- Trainees shall be actively involved in patient care with a gradual progression of responsibility.



Program framework

1) Structure of training program

- The SBRD is a program that runs for a period of 3 years.
- Didactic clinical sciences and advanced clinical training are integrated into the program.
- Documentation of progress in the program and all resident activities must be maintained by the program director and available for review.
- Comprehensive restorative dental care is divided into two parts: junior residency (the first 2 years), which is dependent (under supervision), and senior residency after passing the Part 1 examination (the final year), which is independent.

2) Supervision of the program

The residency program is supervised by various layers of authority, including the following:

- The Chairman of the Scientific Council
- The Supervisory shared training Committee in each sector
- Program Director at the Training Center
- Chief resident.
- Program administrator of SBRD

Minimum training requirements for SBRD residency

The SCFHS requires 3 years of training and completion of the allocated requirements for eligibility to sit in the SBRD examination:

- Clinical requirements (comprehensive cases, single procedures). Refer to Appendix II for guidelines on clinical requirements
- Research project
- Community service.
- Participation in teaching activities.

- Submission of the universal topics completion certificate (minimum 8 topics)
- Conduct a topic activity selected by the trainee (minimum of 1).

Residents should rotate through more than one training center during their residency. The approved annual SBRD training Rota policy is:

- The Chairperson of the Sector's Shared Training Committee should prepare a Rota annually no more than 3 months before the end of the current Rota (i.e., in May).
- Residents will be informed of their Rota no less than 3 months before the end of the current Rota (i.e., in June).
- Each resident will spend no more than 2 years at one training center regardless of the category of SCHS accreditation.
- Peripheral areas may be exempt and can extend up to 3 years, provided the center fulfills all requirement supplements but can be a year in specific cases. The chairperson of the sector's shared training committees will evaluate each case independently.
- Each Rota will follow a preset map in accordance with pre-assigned seats at the training centers.
- Training centers should respect the number of seats assigned and accredited by the SCHS. The chairperson of supervisory shared training committee in each sector should be notified of any changes, and s/he should follow up with each center annually.

Differences between proposed and existing curriculum

CanMEDS 2015 is a curriculum that utilizes a concept of competency-based medical education. In this new curriculum:

Educators will be able to:

- Identify the abilities of individual learners at different stages of their training throughout the program and provide constructive feedback to improve their knowledge and skills.



- Use a range of assessment methods, such as formative, summative, self, and workplace assessment.

Learners will be able to:

- Provide high-quality care to patients and communities in a safe environment.
- Continue to update their knowledge and skills.
- Conduct scientific research to support clinical decision-making and patient management.
- Identify their limits and what they should achieve in each stage of training.
- Select elective topics in the program.
- Increase their abilities to that expected of a health professional at a stage of expertise reflecting the milestones concept and a continuum of learning in CanMEDS 2015.

The inclusion of a preclinical course (transition to discipline stage) is a unique feature of the new curriculum that will provide residents with the knowledge and skills essential for starting practice in a dental clinic. Furthermore, integrating scientific research across all levels will help residents to utilize the evidence-based dentistry concept in their dental clinic.

ABBREVIATIONS

Abbreviation	Meaning
AA	Academic Activity
Assig.	Assignment
BPE	Basic Periodontal Assessment
[C]	Cognitive Domain
CEC	Comprehensive Esthetic Case
CR	Centric Relation
CRA	Caries Risk Assessment
CE	Clinical Encounter
CanMEDS	Canadian Medical Education Directions for Specialists
CAMBRA	Caries Management by Risk Assessment
CBD	Case-Based Discussion
DOPS	Direct Observation of Procedural Skills
ET	Esthetic Technique
EYPT	End Year Progress Test
FBD	Fixed Partial Denture
HoW	Hands-on Workshop



Abbreviation	Meaning
IDP	Interdental Papillae
ILO	Intended Learning Outcome
ITER	In-Training Evaluation Report
[K]	Knowledge Domain
LB	Logbook
MCQ	Multiple Choice Question
Mini-CEX	Mini-Clinical Evaluation Exercise
OSCE	Objective Structured Clinical Examination
OP	Observable Procedure
[P]	Psychomotor Domain
PBC	Posterior Bite Collapse
Part 1	Saudi Board Examination Part 1
Part II	Saudi Board Examination Part 2
PCC	Preclinical Course
PCCT	Preclinical Course Test
RD	Restorative Dentistry
RDITN	Restorative Dentistry Index of Treatment Need
RCT	Root Canal Treatment
SDL	Self-Directed Learning

Abbreviation	Meaning
SCFHS	Saudi Commission for Health Specialties
SBRD	Saudi Board in Restorative Dentistry
SSC-(Dent)	Saudi Specialty Certificate in Restorative Dentistry
SDL	Self-Directed Learning
SOE	Structured Oral Examination
TMJ	Temporomandibular Joint
VDO	Vertical Dimension of Occlusion
WSA	Weekly Scientific Activities
WPA	Workplace-Based Assessment



OUTCOMES AND COMPETENCIES

Clinical Competencies and Learning Outcomes

Dental Expert

As medical experts, SBRD residents integrate all of the CanMEDS roles, applying medical knowledge, clinical skills, and professional values in their provision of high-quality and safe patient-centered care. Being a medical expert is the central role of the dentist in the CanMEDS framework and defines the clinical scope of practice for SBRD residents.

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
1	Practice Dentistry within their defined scope of practice and expertise	<p>1.1.Demonstrate a commitment to high-quality care for their patients [P].</p> <p>1.2.Integrate the intrinsic role of CanMEDS into their dentistry practice [C].</p> <p>1.3.Apply knowledge of the clinical and biomedical sciences relevant to their discipline [C].</p>	✓	✓	✓	CE	CE
		<p>Module 1: Basic Science</p> <p>This module provides the essential knowledge required in the program, including different topics in anatomy, embryology, oral biology, oral pathology, oral microbiology, pharmacology, oral medicine, radiology, and biomaterials. It is delivered in a style that facilitates easy learning of the essential facts of basic science. Topics within this module include the following:</p> <ul style="list-style-type: none"> ● Head and Neck Anatomy* ● Oral Biology* ● Oral Radiology* ● Oral Pathology* ● Dental Pharmacology* ● Basic Material Science* <p>Main suggested resources:</p> <ul style="list-style-type: none"> ▪ Essentials of Oral Histology and Embryology: A Clinical Approach, 3rd edition (Chapters 3 and 5) ▪ Clinically Oriented Anatomy, 7th edition by Moore (Chapters 7 and 9). ▪ Clinical Anatomy, 10th edition by H. Ellis (Chapters 5 and 6). ▪ Oral Radiology Principles and Interpretation, 7th edition (2013; Chapters 3, 7, 8, 10, and 18). 					



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<ul style="list-style-type: none"> Oral and Maxillofacial Pathology, 4th edition by Brad Neville, Douglas Damm, Carl Allen, and Angela Chi (2020). Phillips' Science of Dental Materials, 12th edition by Kenneth J. Anusavice, Chiayi Shen, and H. Ralph Rawls (2012). Craig's Restorative Dental Materials, 14th edition by Ronald L. Sakaguchi, Jack L. Ferracane, and John M. Powers (2018). Additional references are provided by lecturers. 					
		1.1. Head and Neck Anatomy* 1.1.1. List the structures and blood supply of the head and neck [K]. 1.1.2. Explain the structure of the tongue, oropharynx, teeth, and TMJ [K]. 1.1.3. Describe the anatomy of masticatory muscles [K].	✓			PCC	PCCT Part I
		1.2. Oral Biology* 1.2.1. Explain the structures relevant to oral biology, especially the microstructure and physiology of oral tissues. [K].	✓			PCC	PCCT Part I
		1.3. Oral Radiology* 1.3.1. Explain radiation physics and radiation biology [K]. 1.3.2. Discuss radiation hazards and protection [K]. 1.3.3. Recognize imaging techniques and diagnostic oral radiology [C]. 1.3.4. Interpret different types of dental radiographic techniques [C].	✓			PCC	PCCT Part I

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>1.4. Oral Pathology*</p> <p>1.4.1. Explain the importance of oral pathology as an integral part of their education [C].</p> <p>1.4.2. Differentiate some common diseases that might be an area of confusion during their daily practice [C].</p> <p>1.4.3. Recognize the appropriate approach to examine and diagnose oral diseases [C].</p> <p>1.4.4. Discuss the differential diagnoses of bone and soft tissue lesions [C].</p> <p>1.4.5. Discuss the management and referral for treatment of some related oral diseases [K].</p> <p>1.4.6. Discuss the developmental origin that might implicate in the formation of some lesions [K].</p> <p>1.4.7. Identify the risk factors and high-risk areas of oral cancer [K].</p>	✓			PCC	PCCT Part I
		<p>1.5. Dental Pharmacology*</p> <p>1.5.1 Identify types of primary afferent [K].</p> <p>1.5.2 List the steps of pain perception [K].</p> <p>1.5.3 Classify analgesics [K].</p> <p>1.5.4 Recognize the limitations and drug interactions of acetaminophen [C].</p> <p>1.5.5 Differentiate between non-narcotic and narcotic analgesics [C].</p> <p>1.5.6 Select a suitable type of analgesia and</p>	✓			PCC	PCCT Part I Part II



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>dose appropriate for a presented condition [C].</p> <p>1.5.7 Prescribe appropriate analgesic drugs for dental patients to control dental pain [P].</p> <p>1.5.8 Recognize pain management strategies [K].</p> <p>1.5.9 Classify local anesthetic agents [K].</p> <p>1.5.10 Recognize the mode of action of different local anesthetic agents [K].</p> <p>1.5.11 Recognize the possible adverse effects of local anesthetics [C].</p> <p>1.5.12 Select the most suitable methodology for intraoperative and postoperative pain control [C].</p> <p>1.5.13 Identify the effects of systemic diseases or conditions on local anesthetics [C].</p> <p>1.5.14 Differentiate between success and failure of anesthesia [C].</p> <p>1.5.15 Determine methods for enhancement of mandibular anesthesia in symptomatic patients [C].</p> <p>1.5.16 Determine methods for extending the duration of maxillary infiltrations [C].</p>					

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>1.6. Basic Material Science*</p> <p>1.6.1. Discuss the physical, chemical, and mechanical properties of dental materials [K].</p> <p>1.6.2. Define ceramics, polymers, and metals [K].</p> <p>1.6.3. Describe the atomic structure of each material category [C].</p> <p>1.6.4. Describe how atomic bonding and atomic structure affect the general properties of different classes of dental materials [C].</p> <p>1.6.5. Define biocompatibility, toxicity, systemic toxicity, local reactions, and allergic reactions to all dental materials [K].</p> <p>1.6.6. Define stress, strain, and forces [K].</p> <p>1.6.7. Explain the stress-strain curve and related properties [K].</p> <p>1.6.8. Correlate dimensional change and the linear coefficient of thermal expansion with clinical applications in dentistry [C].</p> <p>1.6.9. Recognize importance of elastic modulus, yield strength, and ultimate strength in dental materials [C].</p> <p>1.6.10. Compare the elastic modulus of different dental materials, enamel, and dentine [C].</p>					<p>PCCT Part I Part II EYPT AA CBD</p>
			✓	✓		PCC WSA	



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>1.6.11. Discuss time-dependent mechanical properties (creep and fatigue) [C].</p> <p>1.6.12. Describe the properties of viscous and viscoelastic materials [K].</p> <p>1.6.13. Describe hardness and different microhardness testing techniques [K].</p> <p>1.6.14. Discuss different corrosion mechanisms of metals and their clinical applications [C].</p> <p>1.6.15. Differentiate between electrical conductivity and resistivity [K].</p> <p>1.6.16. Describe galvanism and its clinical applications [C].</p> <p>1.6.17. Correlate water solubility and water sorption with their clinical importance in restorations longevity [C].</p> <p>1.6.18. Define and compare adhesion and cohesion [K].</p> <p>1.6.19. Differentiate between absorption, adsorption, and sorption [K].</p> <p>1.6.20. Describe factors affecting adhesion to tooth structures [C].</p> <p>1.6.21. Describe surface energy and surface tension and their effect on restorative materials wettability [C].</p> <p>1.6.22. Discuss chemical bonding to a tooth structure [C].</p>					

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		1.6.23. Discuss the capillary action and its clinical significance in adhesive dentistry [C].					
		<p>Module 2: Case Assessment and Treatment Planning</p> <p>This module provides and trains residents in the essential knowledge and skills needed to take a patient's medical and dental history and perform a physical examination using a number of methods and tools. This will give residents the chance to build and estimate comprehensive treatment strategies to provide high-quality treatment to their patients. Topics within this module include the following:</p> <ul style="list-style-type: none"> • Patient Assessment, Examination, Diagnosis, and Treatment Planning.* • Periodontal Examination and Diagnosis.* • Follow-up and Recall. <p>Main suggested resources:</p> <ul style="list-style-type: none"> ▪ Diagnosis and Treatment Planning in Dentistry, 3rd edition (2016; Chapters 1, 2, 3, and 4). ▪ Summitt's Fundamentals of Operative Dentistry: A Contemporary Approach, 4th edition by Thomas J. Hilton, Jack L. Ferracane, and James Broome (2013; Chapter 2). ▪ Sturdevant's Art and Science of Operative Dentistry, 6th Edition by Harald O. Heymann, Jr. Edward J. Swift, and Andre V. Ritter (2012; Chapter 3). ▪ Additional references are provided by lecturers. 					
		2.1. Patient Assessment, Examination, Diagnosis, and Treatment Planning*				PCC	PCCT
		2.1.1. Identify the treatment planning phases [K].	✓			SDL	Part I Part II EYPT



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		2.1.2. Discuss the elements of a problem-oriented treatment plan model [K]. 2.1.3. Analyze patient problems and construct a treatment plan based on those problems [C]. 2.1.4. Formulate a main treatment and an alternative plan [C]. 2.1.5. Organize diagnostic steps in a sequential manner [K]. 2.1.6. Identify problems that require modifications of the treatment plan [C]. 2.1.7. Integrate clinical cases to the appropriate level of difficulty [C]. 2.1.8. Perform oral examinations in an emergency clinic [P].					CBD
		2.2. Periodontal Examination and Diagnosis* 2.2.1. Describe different procedures for a periodontal tissue examination [K]. 2.2.2. Perform a clinical periodontal examination and data collection [P]. 2.2.3. Correlate the clinical manifestations of different periodontal diseases [P]. 2.2.4. Apply essential periodontal indices [P].	✓			PCC	PCCT Part I Part II EYPT OSCE
		2.3. Follow-up and Recall 2.3.1. Describe the efficiency of the customized preventive regimen applied [C]. 2.3.2. Describe the criteria of the direct				SDL	Part I Part II EYPT OSCE

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>restorations placed by the residents [C].</p> <p>2.3.3. Describe the treatment outcome of the indirect restorations placed [C].</p> <p>2.3.4. Appraise the caries management and preventive strategies performed [C].</p> <p>2.3.5. Perform follow-up and recall measures on completed cases [P].</p>					SOE CE CBD
Module 3: Applied Dental Biomaterials							
<p>This module provides knowledge of the basic science of dental biomaterials, including their physical, biological, mechanical, and chemical properties. Selection and manipulation of dental materials and longevity of dental restorations in the clinic are discussed. Topics within this module include the following:</p> <ul style="list-style-type: none"> • Dental Amalgam. • Composite Resin.* • Glass Ionomers and Hybrid Ionomers.* • Intermediate Restorative Materials. • Dental Cements. • Ceramics. • Impression Materials.* • Gypsum Products. • Casting Investments. • Dental Waxes. • Dental Casting Alloys and Soldering. • Abrasive and Polishing Materials. <p>Main suggested resources:</p>							



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<ul style="list-style-type: none"> ▪ Phillips' Science of Dental Materials, 12th edition by Kenneth J. Anusavice, Chiayi Shen, and H. Ralph Rawls (2012). ▪ Craig's Restorative Dental Materials, 14th edition by Ronald L. Sakaguchi, Jack L. Ferracane, and John M. Powers (2018). ▪ Applied Dental Materials, 9th edition by John F. McCabe, and Angus W. G. Walls (2013). ▪ Additional references are provided by lecturers. 					
		<p>3.1. Dental Amalgam</p> <p>3.1.1. List different dental amalgam formulations [K].</p> <p>3.1.2. Describe the amalgamation reaction and related phases [K].</p> <p>3.1.3. Correlate amalgam manipulation (trituration, condensation, carving, burnishing, finishing, and polishing) and the effect on strength, dimensional change, creep, and corrosion [C].</p>	✓			WSA SDL	Part I Part II EYPT
		<p>3.2. Composite Resin*</p> <p>3.2.1. Discuss the different components of dental composites [K].</p> <p>3.2.2. Classify dental composites types according to their filler contents [K].</p> <p>3.2.3. List the advantages and disadvantages of composite resins [K].</p> <p>3.2.4. Correlate the properties of different composite formulations with the indicated clinical application [C].</p>	✓			PCC WSA	PCCT Part I Part II EYPT CBD AA

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>3.2.5. Discuss the steps of a composite polymerization reaction [K].</p> <p>3.2.6. Appraise polymerization shrinkage and its clinical significance [C].</p> <p>3.2.7 Explain wear of dental composites [K].</p>					
		<p>3.3. Glass ionomers and Hybrid Ionomers*</p> <p>3.3.1. List the components of glass ionomers [K].</p> <p>3.3.2. Discuss the chemical reaction of glass ionomer cements [K].</p> <p>3.3.3. Describe the properties of glass ionomers [K].</p> <p>3.3.4. Describe the indications of glass ionomers [K].</p> <p>3.3.5. Describe the manipulation of glass ionomers and the effect on clinical performance [C].</p> <p>3.3.6. Describe the uses of hybrid ionomers [K].</p> <p>3.3.7. List the components used in hybrid ionomers [K].</p> <p>3.3.8. Describe the properties of hybrid ionomers [K].</p>	✓	✓		PCC WSA	PCCT Part I Part II EYPT AA



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		3.3.9. Describe the manipulation of hybrid ionomers and the effect on clinical performance [C].					
		3.4. Intermediate Restorative Materials 3.4.1. Identify the different types of intermediate restorative material [K]. 3.4.2. Discuss the indications and contraindications of the different types of intermediate restorative material [C].		✓		SDL	Part I Part II EYPT
		3.5. Dental Cements 3.5.1. Differentiate between cement, bases, and liners [K]. 3.5.2. Classify dental cements according to the chemical reaction involved [K]. 3.5.3. List the indications of each type of cement [K]. 3.5.4. List the components of each type of cement, and indicate their function [K]. 3.5.5. Describe the setting reaction and variables affecting it [K]. 3.5.6. Correlate cement properties (film thickness, working and setting times, compressive strength, retention, and type of bond to tooth structure) with clinical performance [C].		✓		WSA	Part I Part II EYPT CBD AA

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>3.5.7. Describe the biocompatibility of each type of cement [C].</p> <p>3.5.8. Describe the manipulation factors affecting the setting time of each type of cement [C].</p> <p>3.5.9. Mix dental cement according to the manufacturer's instructions [P].</p> <p>3.5.10. Apply appropriate dental cement to indicated teeth [P].</p>					
		<p>3.6. Ceramics</p> <p>3.6.1. Describe the composition of feldspathic porcelain [K].</p> <p>3.6.2. Discuss the different phases of dental porcelain [K].</p> <p>3.6.3. Explain the relationship between the specific physical properties of ceramics and the clinical performance of all-ceramic and ceramic-alloy restorations [C].</p> <p>3.6.4. Describe the mechanism of the bonding between alloys and porcelain and what factors may contribute to the failure of this bond [C].</p> <p>3.6.5. Describe the manipulation of ceramic-alloy restorations.</p> <p>3.6.6. Classify all-ceramic restorations according to their structure and method of fabrication [K].</p>		✓		WSA	Part I Part II EYPT CBD AA



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>3.6.7. Discuss all ceramic-resin bonded restorations [K].</p> <p>3.6.8. Discuss the different types of digital ceramic restoration; explain the indications, advantages, and shortcomings of each type [K].</p> <p>3.6.9. Compare glass and polycrystalline ceramics [C].</p> <p>3.6.10. Explain the high fracture toughness of partially stabilized zircon [K].</p>					
		<p>3.7. Impression Materials*</p> <p>3.7.1. Describe the purpose of impression materials [K].</p> <p>3.7.2. Classify impression materials [K].</p> <p>3.7.3. List the requirements for an ideal impression material [K].</p> <p>3.7.4. List the composition of different types of impression materials and the role of each ingredient [C].</p> <p>3.7.5. Describe the appropriate dispensing and mixing of each type of impression material [K].</p> <p>3.7.6. Discuss the disadvantages of hydrocolloid impression materials [K].</p> <p>3.7.7. Discuss the reaction mechanism for each type of impression material [K].</p> <p>3.7.8. Compare the properties of</p>	✓	✓		PCC WSA	PCCT Part I Part II EYPT CBD AA

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>hydrocolloid and elastomeric impression materials [K].</p> <p>3.7.9. Describe the advantages and disadvantages of each type of impression materials [C].</p> <p>3.7.10. Compare the properties and reactions of the four major elastomeric impression materials, and indicate their clinical applications [C].</p> <p>3.7.11. Describe the disinfection technique used for each type [K].</p> <p>3.7.12. Select appropriate impression materials based on intended use [C].</p>					
		<p>3.8. Gypsum Products</p> <p>3.8.1. Discuss the physical and chemical characteristics of gypsum products including model and die materials [K].</p> <p>3.8.2. Compare the advantages and disadvantages of the different models and die materials in terms of resistance to abrasion, ease of use, time and equipment needed, and other relevant properties [C].</p> <p>3.8.3. Describe the setting reaction of gypsum materials and the effect of different factors on the setting reaction and physical properties of the gypsum [C].</p>		✓		WSA SDL	Part I Part II EYPT AA



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>3.8.4. Describe the factors that influence the ability of gypsum to reproduce detail in an impression [C].</p> <p>3.8.5. Define the properties of strength, hardness, resistance to abrasion, and dimensional accuracy, and explain their importance for gypsum materials clinically [C].</p> <p>3.8.6. Describe the manipulation of gypsum materials [K].</p> <p>3.8.7. Pour a primary and final impression with dental stone [P].</p>					
		<p>3.9. Casting Investments</p> <p>3.9.1. Classify different types of dental investments [K].</p> <p>3.9.2. Explain the setting reaction of dental investment including the concepts of hygroscopic and thermal expansions [C].</p> <p>3.9.3. Discuss investments used for all ceramic and all metal restorations [K].</p> <p>3.9.4. Discuss the causes of casting defects [C].</p>		✓		WSA SDL	Part I Part II EYPT AA
		<p>3.10. Dental Waxes</p> <p>3.10.1. Classify dental waxes and describe their composition and related physical properties [K].</p>		✓		WSA SDL	Part I Part II EYPT

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>3.10.2. Describe the difference between pattern waxes and processing waxes [K].</p> <p>3.10.3. Discuss the properties of melting range, residue, thermal expansion, and residual stress, and cite the clinical relevance of these properties [C].</p> <p>3.10.4. Describe the composition and uses of inlay wax, casting wax, and baseplate wax. Explain the properties of these waxes [C].</p>					AA
		<p>3.11. Dental Casting Alloys and Soldering</p> <p>3.11.1. Classify dental alloys according to their content of noble and non-noble elements [K].</p> <p>3.11.2. Identify noble metals and base metals [K].</p> <p>3.11.3. Discuss dental gold alloys with reference to the alloying elements and explain the role of each element [C].</p> <p>3.11.4. Explain the gold-copper binary phase diagram with reference to age-hardening mechanisms [C].</p> <p>3.11.5. Outline the American Dental Association classification system [K].</p> <p>3. 11.6. Describe the general composition and</p>		✓		WSA SDL	Part I Part II EYPT AA



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>properties of high- noble, non-noble, and base metal casting alloys [K].</p> <p>3.11.7. Compare the properties of low and medium gold alloys with those of alloys with a high gold content [K].</p> <p>3.11.8. Describe alloys for ceramic bonding and discuss the mechanism of bonding [K].</p> <p>3.11.9. Explain the clinical problems associated with the different types of ceramic-bonding alloys [C].</p> <p>3.11.10. Explain how solders are used in dentistry. [K].</p> <p>3.11.11. Discuss base metal alloys and their applications [K].</p> <p>3.11.12. Explain the passivation phenomenon [C].</p> <p>3.11.13. Discuss the properties of titanium and titanium alloys [K].</p> <p>3.11.14. Describe the dimensional changes that occur during the casting process, and explain how they affect the clinical performance of the cast [C].</p> <p>3.11.15. Describe the lost-wax technique and its accuracy in producing a dental casting [K].</p> <p>3.11.16. Explain the process of investing and how the properties of the</p>					

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>investment affect the fitness of cast restorations [C].</p> <p>3.11.17. Describe different casting techniques [K].</p> <p>3.11.18. Explain the causes of casting defects associated with dental castings and how to overcome them [C].</p>					
		<p>3.12. Abrasive and Polishing Materials</p> <p>3.12.1. Define finishing, polishing, cutting, and grinding [K].</p> <p>3.12.2. List the purpose and principles of finishing and polishing techniques [K].</p> <p>3.12.3. Distinguish finishing, polishing, and cleansing abrasives and techniques, and recognize common abrasives [K].</p> <p>3.12.4. Define abrasion and contrast abrasive tools or slurries with cutting instruments.</p> <p>3.12.5. Compare two-body and three-body abrasion [C].</p> <p>3.12.6. Discuss the factors influencing the rate of abrasion and indicate which factor is easiest to control clinically [C].</p> <p>3.12.7. Describe surface roughness and gloss [K].</p>		✓		WSA SDL	Part I Part II EYPT AA
Module 4: Cariology							



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>This module provides a deeper understanding of dental caries, including its etiology, progression, and epidemiological and clinical aspects. There is a focus on diagnosis, prevention, and treatment plan strategies. This module is designed to increase further each resident's understanding of the importance of factors such as lifestyle, general health, and social and cultural circumstances regarding oral health. It covers the different methods used for the prevention of caries, including immunization, fluoridation, antimicrobial agents, and sugar substitutes. Topics within this module include the following:</p> <ul style="list-style-type: none"> • Are We Treating Dental Caries?* • The Dynamics of Dental Caries.* • Dental Caries Diagnosis.* • Caries Risk Assessment Principles and Models.* • Evaluation of Existing Restorations.* • Non-Invasive Caries Prevention and Management Strategies. • Minimally-Invasive Caries Management Strategies. • Management of Deep Caries Lesions. <p>Main suggested resources:</p> <ul style="list-style-type: none"> ▪ Dental Caries: The Disease and its Clinical Management, 3rd Edition by Ole Fejerskov, Bente Nyvad, and Edwina Kidd (2015) ▪ A Best Practice Approach to Caries Management, Michelle Hurlbutt and Douglas A. Young, Journal of Evidence-Based Dental Practice, 2014; 14S: 77-86 ▪ Additional references are provided by lecturers. 					
		<p>4.1. Are We Treating Dental Caries? *</p> <p>4.1.1. Understand the biological concept behind caries as a disease [C].</p> <p>4.1.2. Define dental caries and its signs and symptoms [K].</p> <p>4.1.3. Differentiate between dental caries as a disease and as an infection [C].</p>	✓			PCC	PCCT Part I Part II EYPT

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>4.1.4. Critically appraise restorative dental caries treatment based on evidence [C].</p> <p>4.1.5. Identify different risk factors contributed to caries [C].</p> <p>4.1.6. Criticize clinical cases regarding caries patterns and risk assessments [C].</p>					
		<p>4.2. Dynamics of Dental Caries *</p> <p>4.2.1. Explain the dental caries dynamics [K].</p> <p>4.2.2. Discuss the concepts of dental caries balance and imbalance [C].</p> <p>4.2.3. Explain the concepts of critical pH, saturation, demineralization, and remineralization [C].</p> <p>4.2.4. Justify the appearance of incipient lesions [C].</p>	✓			PCC	PCCT Part I Part II EYPT
		<p>4.3. Dental Caries Diagnosis*</p> <p>4.3.1. Describe the different clinical presentation of caries [K].</p> <p>4.3.2. Demonstrate the optimum method for caries diagnosis [P].</p> <p>4.3.3. Explain the principles of the International Caries Detection and Assessment System (ICDAS) [K].</p> <p>4.3.4. Appraise recent modalities for dental caries detection [C].</p>	✓			PCC	PCCT Part I Part II EYPT OSCE SOE CBD
		<p>4.4. Caries Risk Assessment Principles and Models*</p> <p>4.4.1. Explain the role of oral bacteria and biofilm in dental caries [K].</p>	✓			PCC	PCCT Part I Part II



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>4.4.2. Explain the effect of fluoride and the formation of fluoroapatite [C].</p> <p>4.4.3. Explain the role of diet in caries development [C].</p> <p>4.4.4. Explain the role of saliva in dental caries [C].</p> <p>4.4.5. Summarize the different salivary tests [K].</p> <p>4.4.6. Contrast the different models for caries risk estimation [C].</p> <p>4.4.7. Explain the principles of Caries Management by Risk Assessment (CAMBRA) [C].</p> <p>4.4.8. Explain the principle of caries risk using the Cariogram model [C].</p> <p>4.4.9. Describe the scoring system of each risk factor included in the model [K].</p> <p>4.4.10. Describe the evidence of using Cariogram as a caries risk model [K].</p> <p>4.4.11. Develop caries prevention and management strategies based on caries risk [P].</p>					EYPT OSCE SOE CBD
		<p>4.5. Evaluation of Existing Restorations*</p> <p>4.5.1. Evaluate different types of restorations clinically based on USPHS criteria [K].</p> <p>4.5.2. Discuss the rationale of evaluating existing restorations from a caries-</p>	✓			PCC	PCCT Part I Part II EYPT OSCE SOE

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>balance point of view [C].</p> <p>4.5.3. Understand the association between caries risk and recurrent caries [C].</p> <p>4.5.4. Critically appraise the decision of restoration placement [C].</p> <p>4.5.5. Identify the possible consequences of restoration placement [C].</p> <p>4.5.6. Understand the importance of bitewing radiographs in the quality evaluation of restoration [C].</p> <p>4.5.7. Synthesize a comprehensive “Decision Making Framework” to guide management choices [C].</p>					CBD
		<p>4.6. Non-Invasive Caries Prevention and Management Strategies</p> <p>4.6.1. Identify different oral health products for caries prevention and management [K].</p> <p>4.6.2. Compare the characteristics of the fluoride gel, rinses, and varnishes and their clinical applications [C].</p> <p>4.6.3. Discuss toothbrushing protocol for caries prevention and management [K].</p> <p>4.6.4. Identify different fluoride toothpaste formulations [K].</p> <p>4.6.5. Discuss the role of antimicrobials in caries prevention and management [C].</p> <p>4.6.5. Formulate a clinical protocol to</p>	✓			WSA	Part I Part II EYPT OSCE SOE CBD AA



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		manage caries based on caries risk [C].					
		<p>4.7. Minimally-Invasive Caries Management Strategies</p> <p>4.7.1. Explain modern conservative management strategies of dental caries [K].</p> <p>4.7.2. Discuss the different modalities of fissure therapy [C].</p> <p>4.7.3. Describe the factors that affect the penetration of sealants into the fissure system [C].</p> <p>4.7.4. Explain the clinical technique of preventive resin restoration [K].</p> <p>4.7.5. Discuss the clinical technique of resin infiltration [K].</p> <p>4.7.6. Discuss the applications of abrasion therapy [K].</p> <p>4.7.7. Compare and contrast the indications of minimally invasive strategies [C].</p>	✓			WSA	Part I Part II EYPT OSCE SOE CBD AA
		<p>4.8. Management of Deep Caries Lesions</p> <p>4.8.1. Describe the different caries treatment modalities based on conservative principles [K].</p> <p>4.8.2. Discuss the steps and rationale for deep caries management [C].</p> <p>4.8.3. Explain the importance of pulpal diagnosis during the management of deep caries lesions [C].</p> <p>4.8.4. Appraise the importance of the concept</p>	✓			WSA	Part I Part II EYPT OSCE SOE CBD AA

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		of peripheral seal for deep caries management [C].					
Module 5: Operative Dentistry							
<p>This module provides essential clinical skills required for residents specializing in restorative dentistry. It emphasizes the practical aspects of tooth preparation and selection of appropriate restorative dental materials, based on sound clinical principles from the best available evidence. Residents discuss common restorative problems and review their causes and solutions in seminal scientific articles. Topics within this module include the following:</p> <ul style="list-style-type: none"> • Clinical Significance of Dental Anatomy, Histology, and Physiology.* • Instruments and Equipment for Tooth Preparation. • Dental Ergonomics.* • Clinical Application of Amalgam and Amalgam Toxicity. • Fundamental Concepts of Enamel and Dentin Adhesion.* • Clinical Application of Resin Composite.* • Light Curing Units.* • Clinical Application of Glass Ionomers.* • Direct Restorative Strategies of Mutilated Teeth. • Restoration Failures and Repair. • Controversial Issues in Operative Dentistry. • Tooth Surface Loss. • Dental Fluorosis. • Vital Pulp Therapy. • Dental Trauma. • Reactions of Pulpal-Dentin Complex to Caries and Restorative Procedures. • Biomimetic Approaches in Restorative Dentistry. • Bioactive Dental Materials in Restorative Dentistry. 							



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>Main suggested resources:</p> <ul style="list-style-type: none"> ▪ Summitt's Fundamentals of Operative Dentistry: A Contemporary Approach, 4th edition by Thomas J. Hilton, Jack L. Ferracane, and James Broome (2013) ▪ Sturdevant's Art and Science of Operative Dentistry, 6th Edition by Harald O. Heymann, Jr. Edward J. Swift, and Andre V. Ritter (2012) ▪ Pashley DH. Dynamics of the pulpo-dentin complex. Crit Rev Oral Biol Med. 1996;7(2):104-33. doi: 10.1177/10454411960070020101. PMID: 8875027. ▪ Magne, Pascal, and U Belser. Bonded Porcelain Restorations in the Anterior Dentition: A Biomimetic Approach. Chicago: Quintessence Pub. Co, 2002. Print. ▪ Opdam N, Frankenberger R, Magne P. From 'Direct Versus Indirect' Toward an Integrated Restorative Concept in the Posterior Dentition. Oper Dent. 2016 Sep;41(S7):S27-S34. doi: 10.2341/15-126-LIT. Epub 2016 Sep 8. PMID: 26918928. ▪ Magne P. Composite resins and bonded porcelain: the postamalgam era? J Calif Dent Assoc. 2006 Feb;34(2):135-47. PMID: 16724469. ▪ Jefferies SR. Bioactive and biomimetic restorative materials: a comprehensive review. Part I. J Esthet Restor Dent. 2014 Jan-Feb;26(1):14-26. doi: 10.1111/jerd.12069. Epub 2013 Dec 17. PMID: 24341542. ▪ Jefferies S. Bioactive and biomimetic restorative materials: a comprehensive review. Part II. J Esthet Restor Dent. 2014 Jan-Feb;26(1):27-39. doi: 10.1111/jerd.12066. Epub 2013 Dec 17. PMID: 24341442. 					
		<p>5.1. Clinical Significance of Dental Anatomy, Histology, and Physiology*</p> <p>5.1.1. Describe the specific anatomic features of each tooth that help in diagnosis and treatment planning [K].</p> <p>5.1.2. Illustrate the physiologic tooth forms and contours that affect the</p>	✓			PCC	PCCT Part I Part II EYPT

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>supporting dental and paradental tissues [K].</p> <p>5.1.3. Explain the biological principles and details of the development, structure, and function of the hard and soft tissues in the oral cavity [K].</p>					
		<p>5.2. Instruments and Equipment for Tooth Preparation</p> <p>5.2.1. Recognize the different types of instruments used in the operative field [K].</p> <p>5.2.2. Identify the different materials, parts, grasp techniques, and motions associated with cavity preparation instruments [K].</p> <p>5.2.3. Justify the use of different types of instruments according to the clinical situation [C].</p>	✓			SDL	Part I Part II EYPT CBD
		<p>5.3. Dental Ergonomics*</p> <p>5.3.1. Explain the concept of dental ergonomics [K].</p> <p>5.3.2. Explain the dental risk factors for musculoskeletal disorders [C].</p> <p>5.3.3. Describe the intervention strategies against musculoskeletal disorders [C].</p> <p>5.3.4. Identify the best ergonomic working position for the dental personnel [C].</p> <p>5.3.5. Discuss exercises for maintaining a</p>	✓			PCC WSA	PCCT Part I Part II EYPT



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		healthy posture [K].					
		<p>5.4. Clinical Application of Amalgam and Amalgam Toxicity</p> <p>5.4.1. Identify the indications of dental amalgam [K].</p> <p>5.4.2. Identify the criteria for successful amalgam restoration [C].</p> <p>5.4.3. Apply the steps of manipulation and restoration of posterior teeth using amalgam [P].</p> <p>5.4.4. Perform the finishing and polishing steps of amalgam restoration [P].</p> <p>5.4.5. List the American Dental Association recommendations for mercury hygiene and safety [K].</p> <p>5.4.6. Explain the importance and use of mercury separators in dental clinics [C].</p> <p>5.4.7. Critique the toxic effect of amalgam as reported in the literature [K].</p> <p>5.4.8. List the precautionary measures for limiting the exposure to mercury and mercury vapor during amalgam removal [K].</p> <p>5.4.9. Apply precautionary measures of amalgam hazards in the clinic [P].</p>	✓			WSA	Part I Part II EYPT CBD CE
		5.5. Fundamental Concepts of Enamel and Dentin Adhesion*	✓			PCC WSA	PCCT Part I

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		5.5.1. Indicate the components and classification of bonding agents [K]. 5.5.2. Describe the properties of bonding agents and indicate their clinical application [C]. 5.5.3. Define hybridization [K]. 5.5.4. Recognize different factors affecting the efficacy and durability of dental adhesives during the bonding procedure [C]. 5.5.5. Describe the manipulation of bonding agents [C]. 5.5.6. Apply dental adhesives for composite restoration following the standard protocols [P].					Part II EYPT CBD CE
		5.6. Clinical Application of Resin Composite* 5.6.1. Explain the indications and contraindications of composite restorations [K]. 5.6.2. Correlate the material properties with indications and contraindications [C]. 5.6.3. Explain the conservative design for cavity preparation for anterior and posterior composite restoration [K]. 5.6.4. Discuss manipulation of layering techniques for composite restorations [C]. 5.6.5. Describe the "C-factor" concept and	✓			PCC WSA HoW	PCCT Part I Part II EYPT CBD CE DOPS



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>its clinical significance [C].</p> <p>5.6.6. Highlight the importance of proper proximal contacts and different matricing options to achieve it [C].</p> <p>5.6.7. Describe the various sectional matrix systems and their clinical application [C].</p> <p>5.6.8. Describe finishing and polishing techniques of composite restorations [K].</p> <p>5.6.9. Discuss special considerations in restoring crowded teeth and their complications [C].</p> <p>5.6.10. Restore anterior teeth with composite restorations [P].</p> <p>5.6.11. Restore posterior teeth with composite restorations [P].</p> <p>5.6.12. Apply the finishing and polishing steps of composite restoration [P].</p>					
		<p>5.7. Light Curing Units*</p> <p>5.7.1. List the different types of light-curing units [K].</p> <p>5.7.2. List the desirable features of light-curing units and their clinical significance [C].</p> <p>5.7.3. Describe the protective equipment required during light-curing composite restorations [C].</p> <p>5.7.4. Define irradiance and its clinical</p>	✓			PCC WSA	PCCT Part I Part II EYPT

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		significance [C]. 5.7.5. Appraise the factors affecting the depth of cure and degree of conversion of light-activated composites [C].					
		5.8. Clinical Application of Glass Ionomers* 5.8.1. Identify the clinical applications of glass ionomer and its modifications [C]. 5.8.2. Describe the clinical steps of glass ionomer restorations and its modifications [C]. 5.8.3. Restore teeth using glass ionomer restoration [P].	✓			PCC WSA	PCCT Part I Part II EYPT CE
		5.9. Direct Restorative Strategies of Mutilated Teeth 5.9.1. Identify conservative principles of tooth restorability determination [C]. 5.9.2. Determine tooth restorability in clinical settings [P]. 5.9.3. Determine the type of restorative materials needed for clinical situations involving mutilated teeth [C]. 5.9.4. Compare various clinical treatment modalities for mutilated teeth [C]. 5.9.5. Formulate a rationale for conservative treatment of badly		✓		WSA	Part I Part II EYPT CBD CE



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>mutilated teeth with the emphasis on proper pulpal diagnosis and treatment protocol [C].</p> <p>5.9.6. Restore mutilated teeth in clinical settings following conservative principles [P].</p>					
		<p>5.10. Restoration Failures and Repair</p> <p>5.10.1. Explain the criteria for a successful restoration [K].</p> <p>5.10.2. Appraise the clinical criteria for evaluation of restorations using USPHS [C].</p> <p>5.10.3. Discuss reasons for failure of different types of dental restorations [C].</p> <p>5.10.4. Justify the appropriate management for each type of failure [C].</p> <p>5.10.5. Identify indications for refurbishing, repair, and resurfacing [C].</p> <p>5.10.6. Determine types of failure in clinical settings [P].</p> <p>5.10.7. Manage a failed restoration in clinical settings [P].</p>		✓		WSA	Part I Part II EYPT CBD CE
		<p>5.11. Controversial Issues in Operative Dentistry</p> <p>5.11.1. Identify different indications for open and closed sandwich techniques [C].</p> <p>5.11.2. Identify decision making processes for direct-indirect restorative</p>			✓	WSA	Part I Part II EYPT CBD

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		techniques [C]. 5.11.3. Discuss strategies for the management of deep caries lesions [C].					
		5.12. Tooth Surface Loss 5.12.1. Identify common etiological factors and types for tooth surface loss [K]. 5.12.2. Correlate the clinical presentations of tooth surface loss with etiological factors [C]. 5.12.3. Determine the diagnosis of attrition, abrasion, and erosion [C]. 5.12.4. Determine the treatment strategies and restorative materials for managing attrition, abrasion, and erosion [C]. 5.12.5. Recognize cases with loss of vertical dimension for referral [C]. 5.12.6. Diagnose a patient with tooth surface loss [P]. 5.12.7. Manage a patient with tooth surface loss following conservative principles [P].		✓		WSA	Part I Part II EYPT CBD CE
		5.13. Dental Fluorosis 5.13.1. Define dental fluorosis [K]. 5.13.2. Discuss the pathogenesis of dental fluorosis [K]. 5.13.3. Classify dental fluorosis [C]. 5.13.4. Describe the clinical appearance of dental fluorosis [C].		✓		WSA	Part I Part II EYPT CBD CE



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		5.13.5. Discuss the conservative approaches for dental fluorosis management [C]. 5.13.6. Master the diagnosis of dental fluorosis [P]. 5.13.7. Master the conservative management of dental fluorosis [P].					
		5.14. Vital Pulp Therapy 5.14.1. Describe the functions of the vital dental pulp [K]. 5.14.2. Recognize the formation of reparative dentin [P]. 5.14.3. Classify techniques for generating reparative dentin [K]. 5.14.4. Differentiate between pulpal statuses based on clinical findings [C]. 5.14.5. Describe direct pulp capping [K]. 5.14.6. Describe indirect pulp capping [K]. 5.14.7. Differentiate between pulpotomy and partial pulpotomy [C]. 5.14.8. List indications for vital pulp therapy [K]. 5.14.9. Compare vital pulp therapy materials [C]. 5.14.10. Recognize diagnostic criteria for a successful outcome of vital pulp therapy [C]. 5.14.11. Mention treatment recommendations for direct pulp	✓			WSA	Part I Part II EYPT CBD CE

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>capping [K].</p> <p>5.14.12. Perform one-step pulp capping [P].</p> <p>5.14.13. Mention types of final restoration after pulp capping procedures [K].</p> <p>5.14.14. Select postoperative follow-up regimen [C].</p>					
		<p>5.15. Dental Trauma</p> <p>5.15.1. List the etiology of dental trauma [C].</p> <p>5.15.2. List the appropriate information needed when examining patients with dental injuries [K].</p> <p>5.15.3. Describe the different clinical presentations of cases with dental trauma [K].</p> <p>5.15.4. Describe the details of radiographic examination when examining patients with dental injuries [C].</p> <p>5.15.5. Discuss the different diagnostic aids used in cases with dental trauma [C].</p> <p>5.15.6. Describe the various treatment options for cases with dental trauma [C].</p> <p>5.15.7. Master the management of different types of dental trauma including referral of multidisciplinary cases [P].</p>		✓		WSA	Part I Part II EYPT CBD CE
		5.16. Reactions of Pulpal-Dentin Complex to		✓		WSA	Part I



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>Caries and Restorative Procedures</p> <p>5.16.1. Explain the effect of various types of irritants on the pulp-dentin complex [C].</p> <p>5.16.2. Correlate clinical symptoms and pulpal inflammation [C].</p> <p>5.16.3. Identify causes of dentin hypersensitivity [C].</p> <p>5.16.4. Desirable management options for dental hypersensitivity [C].</p> <p>5.16.5. Recognize pulp-dentin complex's reactions to restorative procedures and materials [C].</p> <p>5.16.6. Appraise pulp-dentin complex's reactions to vital bleaching [C].</p> <p>5.16.7. Discuss the long-term effects of crown preparation on pulp vitality [C].</p> <p>5.16.8. Outline the factors that influence the quantity of heat generated during restorative procedures [K].</p> <p>5.16.9. Discuss the causes of odontoblastic death during dental procedures [C].</p> <p>5.16.10. Explain the vibratory phenomenon and shockwaves [C].</p> <p>5.16.11. Discuss the effect of dentin desiccation and how to avoid it [C].</p> <p>5.16.12. Explain the effect of the presence of a smear layer on the pulp-dentin complex [C].</p>					Part II EYPT CBD CE

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>5.16.13. Explain the effect of remaining dentin thickness on pulpal health [C].</p> <p>5.16.14. Explain the effect of acid etching on pulpal health [C].</p> <p>5.16.15. Identify guidelines to decrease pulpal injury following tooth preparation [C].</p> <p>5.16.16. Discuss crown cementation dynamics and the effect on the pulp-dentin complex [C].</p> <p>5.16.17. Discuss the different methods used to protect pulp against chemical, electrical, thermal, and mechanical irritations [C].</p>					
		<p>5.17. Biomimetic Approaches in Restorative Dentistry</p> <p>5.17.1. Define the concept of biomimetic dentistry [K].</p> <p>5.17.2. Identify loss of hard dental tissues [K].</p> <p>5.17.3. Recognize the indications and contraindications of biomimetic approaches [K].</p> <p>5.17.4. List the various dental materials used in biomimetic dentistry [K].</p> <p>5.17.5. Describe the techniques of biomimetic dentistry [C].</p> <p>5.17.6. Master the clinical application of biomimetic techniques [P].</p>	✓			WSA	Part I Part II EYPT CBD CE



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>5.18. Bioactive Dental Materials in Restorative Dentistry</p> <p>5.18.1. Recognize the different bioactive dental materials [C].</p> <p>5.18.2. Identify the effects of bioactive materials on dental tissues [C].</p> <p>5.18.3. List the clinical conditions requiring bioactive material use [K].</p> <p>5.18.4. List the limitations of bioactive materials [K].</p> <p>5.18.5. Master the clinical application of bioactive materials in various clinical conditions [P].</p>		✓		WSA	Part I Part II EYPT CBD CE
		<p>Module 6: Esthetics</p> <p>This module conveys the science and art of dental esthetics. It covers the essential topics and materials needed to provide excellent esthetics for the patient, including smile analysis, properties of the color used, shade selection, and different types of restoration. The resident is also exposed to new technology in smile analysis. Topics within this module include the following:</p> <ul style="list-style-type: none"> • Principles of Light and Color in Dentistry.* • Conservative Treatment for Vital Discolored Teeth.* • Conservative Treatment for Non-Vital Discolored Teeth.* • Esthetic Considerations in Diagnosis and Treatment Planning.* • Veneers.* • Indirect Posterior Tooth-Colored Restorations.* <p>Main suggested resources:</p>					

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<ul style="list-style-type: none"> ▪ Contemporary Fixed Prosthodontics 5th Edition Chapter 23: Description of Color, Color-Replication Process, and Esthetics ▪ Summitt's Fundamentals of Operative Dentistry: A Contemporary Approach – 4th Ed. (2013) Chapter 3. Esthetic Considerations in Diagnosis and Treatment Planning Chapter 4. Color and Shade Matching Chapter 16. Natural Tooth Bleaching Chapter 19: Esthetic Inlays and Onlays ▪ Fundamentals of Color: Shade Matching and Communication in Esthetic Dentistry Second Edition (2011) Chapter 1: Color Education and Training Chapter 2: Color Theory Chapter 3: Elements Affecting Color Chapter 7: Material Selection ▪ Sturdevant's art and science of operative dentistry 6th edition Chapter 11: Indirect Tooth-Colored Restorations Chapter 12: Additional Conservative Esthetic Procedures ▪ Bonded Porcelain Restorations in the Anterior Dentition: A Biomimetic Approach Book by Pascal Magne and U. Belser, Chapter 2: Natural Oral Esthetics Chapter 4: Evolution of Indications for Anterior Bonded Porcelain Restorations Chapter 5: Initial Treatment Planning and Diagnostic Approach Chapter 6: Tooth Preparation, Impression and Provisionalization, Chapter 7: Laboratory procedures Chapter 8: Try-in and adhesive luting procedures Chapter 9: Maintenance and Repairs ▪ Summitt's Fundamentals of Operative Dentistry: A Contemporary Approach – 4th Ed. (2013) Chapter 17: Porcelain Veneers 					



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<ul style="list-style-type: none"> The Science and Art of Porcelain Laminate Veneers Galip Gurel 2003. Chapter 2: Smile Design Chapter 3: Adhesion Chapter 7: Atlas of Porcelain Laminate Veneers Chapter 9: Porcelain Laminate Veneers for Diastema Closure Clinical applications of digital dental technology R Masri, CF Driscoll – 2015 Chapter 4: Digital Application in Operative Dentistry. Additional references are provided by lecturers. 					
		<p>6.1. Principles of Light and Color in Dentistry*</p> <p>6.1.1. Discuss the electromagnetic radiation, including the components of daylight with different wavelengths [K].</p> <p>6.1.2. List different light sources (illumination). [K].</p> <p>6.1.3. Define emission, transmission, and absorption of light [K].</p> <p>6.1.4. Discuss fluorescence, opalescence, translucency and metamerism [K].</p> <p>6.1.5. Discuss the factors affecting shade matching [C].</p> <p>6.1.6. Discuss the dimensions of color with reference to hue, value, and chroma [K].</p> <p>6.1.7. Recognize the recommended protocol for shade matching [C].</p> <p>6.1.8. Apply the principles of light and color in clinical cases during shade selection</p>	✓	✓		PCC WSA HoW	PCCT Part I Part II EYPT AA SOE

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		[P]. 6.1.9. Select the tooth shade using different shade guide systems [P].					
		6.2. Conservative Treatment for Vital Discolored Teeth* 6.2.1. Recognize types and the nature of tooth discoloration with reference to different etiologic factors [C]. 6.2.2. Distinguish the types, composition, and mode of action of tooth bleaching agents and techniques (Home vs office) [C]. 6.2.3. Recognize the effects of bleaching agents on restorative procedures and materials [C]. 6.2.4. Describe the steps of macroabrasion and microabrasion techniques [C]. 6.2.5. Discuss the clinical steps of resin-infiltration technique [K]. 6.2.6. Compare and contrast between conservative treatment options for tooth discoloration [C]. 6.2.7. Master the different techniques used to manage discolored teeth [P].	✓	✓		PCC WSA HoW	PCCT Part I Part II EYPT AA SOE CBD CE
		6.3. Conservative Treatment for Non-Vital Discolored Teeth* 6.3.1. Analyze measures to prevent tooth discoloration secondary to endodontic treatment [C].	✓	✓		PCC WSA HoW	PCCT Part I Part II EYPT



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>6.3.2. Select the appropriate management and technique according to the cause of discoloration [C].</p> <p>6.3.3. Recognize the potential adverse effects of internal bleaching and discuss means of prevention [C].</p> <p>6.3.4. Describe each step of the internal "walking- bleach" technique [K].</p> <p>6.3.5. Apply non-vital bleaching in indicated cases [P].</p>					AA SOE CBD
		<p>6.4. Esthetic Considerations in Diagnosis and Treatment Planning*</p> <p>6.4.1. Recognize esthetic dental problems according to the etiology [C].</p> <p>6.4.2. Differentiate between esthetic and cosmetic considerations [C].</p> <p>6.4.3. Recognize how to achieve high esthetic outcomes [C].</p> <p>6.4.4. List treatment modalities to address different esthetic and dental problems [K].</p> <p>6.4.5. Differentiate between all treatment modalities for esthetic problems [C].</p> <p>6.4.6. Describe facial, dento-labial, teeth, and gingival analysis [K].</p> <p>6.4.7. Perform a facial and smile analysis [P].</p> <p>6.4.8. Recognize the fundamentals of Digital Smile Design [C].</p>	✓	✓		WSA SDL	Part I Part II EYPT AA SOE CBD

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>6.5. Veneers*</p> <p>6.5.1. Review laminate veneers history [K].</p> <p>6.5.2. Recognize the indications, contraindications, advantages, and disadvantages of different types of direct and indirect esthetic veneers [C].</p> <p>6.5.3. Recognize pre-operative evaluation criteria (Analyzing the Smile) [C].</p> <p>6.5.4. Explain mock-up techniques for veneer cases [K].</p> <p>6.5.5. Discuss ways of laboratory communication [K].</p> <p>6.5.6. Recognize Aesthetic Pre-recontouring (APR) and Aesthetic Pre-evaluative Temporaries (APTs) [C].</p> <p>6.5.7. Explain different preparation designs and technique for composite and porcelain veneers [K].</p> <p>6.5.8. Explain shade selection criteria, impression, and provisionals techniques [K].</p> <p>6.5.9. Discuss try-in steps and bonding techniques [C].</p> <p>6.5.10. Explain postoperative care [K].</p> <p>6.5.11. Recognize factors leading to failure [C].</p> <p>6.5.12. Prepare indicated teeth for porcelain veneers using different designs. [P].</p> <p>6.5.13. Master composite veneer build-up</p>	✓	✓	✓	PCC WSA HoW	PCCT Part I Part II EYPT AA SOE CBD CE DOPS



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>using the layering technique [P].</p> <p>6.4.14. Master porcelain veneers cementation using resin cement [P].</p>					
		<p>6.6. Indirect Posterior Tooth-Colored Restorations*</p> <p>6.6.1. Differentiate between composite and indirect ceramic restorations in terms of physical and mechanical properties [C].</p> <p>6.6.2. Justify the use of different materials and techniques according to the clinical situation [C].</p> <p>6.6.3. Recognize steps of direct/indirect technique [K].</p> <p>6.4.4. Master designs of indirect tooth-colored restoration [P].</p> <p>6.4.5. Recognize fundamentals, advantages, and disadvantages of Digital Dentistry Technology [C].</p> <p>6.4.6. Identify indications and limitations of digitally-designed and fabricated single-unit restoration and the material used on the best evidence available [K].</p> <p>6.4.7. Describe the principles, design, and intraoral scanning for tooth preparation by digital technology (CAD/CAM) [K].</p> <p>6.4.8. Recognize the steps of complete digital workflow for patient care in the clinic</p>	✓	✓		<p>PCC</p> <p>WSA</p> <p>SDL</p> <p>HoW</p>	<p>PCCT</p> <p>Part I</p> <p>Part II</p> <p>EYPT</p> <p>AA</p> <p>SOE</p> <p>CBD</p> <p>CE</p> <p>DOPS</p>

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		[C]. 6.4.9. Perform digitally-designed and fabricated single-unit restoration [P].					
		Hands-on Training Session <ol style="list-style-type: none"> Practice anterior esthetic analysis and guidelines. Practice composite material properties. Learn different composite layering techniques, effects and tints. Practice esthetic Class IV composite layering techniques, finishing and polishing. Comprehend tips and tricks for daily clinical situations and predictable Esthetic and Functional outcomes. 	✓			HoW	CE OSCE SOE
Module 7: Digital Restorative Dentistry							
<p>This module teaches the basic principles of digital dentistry in the restorative discipline. In this module, residents will be familiar with the major components of dental computer-aided design (CAD) and computer-assisted manufacturing (CAM) technologies and their related processes of data or image acquisition; image or information analysis and manipulation, or computer-assisted manufacturing. Residents will understand the difference between subtractive and additive dental CAD/CAM processes and when to use them. They will have an in depth understanding of the material compositions of currently available materials for CAD/CAM fabrication. They will also be able to list the criteria for a successful digital restoration and how to apply these criteria in a clinical situation, when required. Topics within this module include the following:</p> <ul style="list-style-type: none"> The History of CAD/CAM in Dentistry. 							



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<ul style="list-style-type: none"> Digital Scanning and its Applications.* Optimizing Preparations and Gingival Retraction for Scanning.* Principles of Designing Restorations using digital workflow.* Materials Optimized for CAD/CAM. Manufacturing and Milling Technologies. Digital Workflow and its Variations.* Role of Cone Beam Computed Tomography Technology in CAD/CAM. Same Day Dentistry.* CAD/CAM for Anterior and Posterior Full-Coverage Restorations. Implant Treatment utilizing digital dentistry. <p>Main suggested resources:</p> <ul style="list-style-type: none"> Jonathan L. Ferencz & Nelson R.F.A. Silva. "Fundamentals of CAD/CAM Dentistry" American College of Prosthodontists, 2019. Apple Books. https://books.apple.com/us/book/fundamentals-of-cad-cam-dentistry/id1451346022 "Clinical Applications of Digital Dental Technology", Radi Masri, DDS, MS, PhD Carl F. Driscoll, DMD, 2015. Print ISBN:9781118655795 Online ISBN:9781119045564 DOI:10.1002/9781119045564 Copyright © 2015 John Wiley & Sons, Inc. Tamimi, Faleh & Hirayama, Hiroshi. (2019). Digital Restorative Dentistry A Guide to Materials, Equipment, and Clinical Procedures: A Guide to Materials, Equipment, and Clinical Procedures. 10.1007/978-3-030-15974-0. Additional references are provided by lecturers. 					
		7.1. The History of CAD/CAM in Dentistry					Part II
		7.1.1. Understand the basic components of dental CAD/CAM technology [K].	✓			WSA HoW	EYPT
		7.1.2. Discuss the evolution of dental					SOE

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		CAD/CAM technology [K]. 7.1.3. Identify areas of dentistry to which CAD/CAM technology can be applied [K].					
		7.2. Digital Scanning and its Applications* 7.2.1. Understand the components of digital dental scanning systems [K]. 7.2.2. Discuss the differentiating characteristics among various types of digital dental scanners [K]. 7.2.3. Explain the applications for digital dental scanners [C].	✓			PCC WSA HoW	PCCT Part I Part II EYPT AA SOE CE
		7.3. Optimizing Preparations and Gingival Retraction for Scanning* 7.3.1. Understand the importance of proper preparation design and gingival retraction techniques when taking digital impressions [C]. 7.3.2. Discuss the preparation design requirements for different types of CAD/CAM restorations [P]. 7.3.3. Understand the methods for achieving appropriate gingival retraction for digital impression-taking [C].	✓	✓		PCC WSA HoW	PCCT Part I Part II EYPT CBD AA SOE CE
		7.4. Principles of Designing Restorations using digital workflow* 7.4.1. Explain the capabilities of available dental CAD systems for	✓			PCC WSA HoW	PCCT Part I Part II EYPT



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>designing restorations [K].</p> <p>7.4.2. Explain the limitations of available dental CAD systems for designing restorations [K].</p> <p>7.4.3. Describe the anatomical, functional, and esthetic attributes and aspects of restorations that can be integrated and manipulated into restoration design [C].</p> <p>7.4.4. Discuss a typical process for designing a restoration using digital processes. [K].</p>					CBD AA SOE
		<p>7.5. Materials Optimized for CAD/CAM</p> <p>7.5.1. Identify currently available materials for fabricating CAD/CAM restorations. [K]</p> <p>7.5.2. Understand the material compositions of currently available materials for CAD/CAM fabrication. [K]</p> <p>7.5.3. Ascertain which dental materials can be used for different types of CAD/CAM manufacturing processes [K]</p>		✓		WSA	Part I Part II EYPT CBD AA SOE
		<p>7.6. Manufacturing and Milling Technologies</p> <p>7.6.1. Explain the difference between subtractive and additive dental</p>			✓	WSA	Part I Part II EYPT

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>CAD/CAM processes [K].</p> <p>7.6.2. Describe the dental CAD/CAM milling process and the components involved [K].</p> <p>7.6.3. Discuss the differentiating characteristics of dental CAD/CAM milling machines [K]. Explain the different types of additive dental CAD/CAM processes [K].</p>					CBD AA SOE
		<p>7.7. Digital Workflow and its Variations*</p> <p>7.7.1. Discuss various workflow models that are possible in dentistry by incorporating different CAD/CAM technologies in dental practices and dental laboratories [K].</p> <p>7.7.2. Explain the factors affecting ease of interoperability and collaboration among dental professionals when using dental CAD/CAM technologies [K].</p> <p>7.7.3. Describe the current and potential applications of CAD/CAM dental technologies when dental practices, their laboratories, and their specialist colleagues participate in a digital workflow model [C].</p>	✓			PCC WSA	PCCT Part I Part II EYPT CBD AA SOE
		7.8. Role of Cone Beam Computed Tomography Technology in CAD/CAM		✓		WSA	Part I Part



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>7.8.1. Understand the basic principles of CBCT scanning technology [K].</p> <p>7.8.2. Discuss the influence of various scanning, reconstruction, and artifacts on image quality [K].</p> <p>7.8.3. Identify the principles of CBCT 3D image reconstruction [K].</p> <p>7.8.4. Recognize the applications of CBCT in the CAD/CAM workflow and integration with other imaging modalities [K]</p>					II EYPT CBD AA SOE
		<p>7.9. Same Day Dentistry*</p> <p>7.9.1. Describe the types of restorations that can be delivered using a same day, in-office CAD/CAM workflow model [K].</p> <p>7.9.2. Explain the aspects of traditional analog restorative processes that in-office CAD/CAM technologies can replace [C].</p> <p>7.9.3. Discuss a typical same day, in-office CAD/CAM restoration workflow process [K].</p>	✓			PCC WSA	PCCT Part I Part II EYPT CBD AA SOE CE
		<p>7.10. CAD/CAM for Anterior Full-Coverage Restorations</p> <p>7.10.1. Understand the digital workflow processes followed for anterior full-coverage crown restorations [K].</p> <p>7.10.2. Discuss the ways in which digital</p>		✓		WSA	Part I Part II EYPT CBD AA

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>dental workflow models streamline the patient appointment and restorative technique processes [K].</p> <p>7.10.3. Discuss workflows for restorative planning, designing, and delivering anterior full-coverage crown restorations [K].</p> <p>7.10.4. Discuss material choices for CAD/CAM anterior full-coverage crown restorations [K].</p> <p>7.10.5. Identify aspects of the restorative process that could be completed with digital techniques, rather than analog processes [C].</p>					SOE
		<p>7.11. Implant Treatment utilizing digital dentistry</p> <p>7.11.1. Identify aspects of the surgical/prosthetic implant treatment planning using digital techniques [K].</p> <p>7.11.2. Discuss image-guided implant surgery planning software's [K].</p> <p>7.11.3. Discuss digital impression for dental implant planning [K].</p> <p>7.11.4. Discuss bite and occlusal relationship registration for dental implant planning [K].</p> <p>7.11.5. Explain virtual prosthetic and dental implant planning software's [K].</p>		✓		WSA	Part I Part II EYPT CBD AA SOE



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>7.11.6. Discuss principles of guided surgical implant placement processes, using digital techniques [K].</p> <p>7.11.7. Explain the fabrication methods of CAD/CAM generated implant surgical guides [K].</p> <p>7.11.8. Discuss the restorative workflows for the CAD/CAM design process of implant supported prostheses [K].</p> <p>7.11.9. Discuss material choices for CAD/CAM of implant supported prostheses [K].</p> <p>7.11.10. Discuss complications of CAD/CAM [K].</p> <p>7.11.11. Discuss the ways in which digital dental workflow models streamline the appointments and procedures associated with dental implant treatments [C].</p>					
		<p>Hands-on Training Session</p> <ol style="list-style-type: none"> 1. Practice intraoral scanning for a single crown. 2. Practice Intraoral scanning for a single implant supported crown. 3. Demonstrate the restorative workflow of a single restorative crown. 4. Demonstrate the restorative workflow of a single implant supported crown. 	✓			HoW	CE OSCE SOE

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		5. Perform CBCT interpretation. 6. Demonstrate the superimposition process of a CBCT and STL files. 7. Design a surgical guide for a guided implant placement. 8. Practice 3D printing strategies for different 3D printers. 9. Demonstrate the 3D printing methods and its applications. 10. Demonstrate the different millings machines and milling methods.					
		Module 8: Fixed Prosthodontics This module imparts essential clinical knowledge and skills. It emphasizes the practical aspects of fixed prosthodontics, starting with the treatment plan, tooth preparation, provisionalization, and impression technique, ending with cementation and management of complications. Topics within this module include the following: <ul style="list-style-type: none"> • Treatment Planning for Single and Multiple Missing Teeth* • Resin-Bonded FD • Cantilever FDP • Pier Abutment • Prosthetic Treatment of Dentition with Periodontal Disease • Principles of Tooth Preparation* • Fluid Control, Soft Tissue Management, and Impression Techniques • Pontics and the Edentulous Ridge • Type of Post and Core* • Provisional Restoration* • Diagnostic Wax-up* 					



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<ul style="list-style-type: none"> Try in, Adjustment, Polishing, and Cementation Technique Causes and Management of Failed Crowns and Fixed Partial Dentures <p>Main suggested resources:</p> <ul style="list-style-type: none"> Contemporary Fixed Prosthodontics, 5th Edition, Stephen Rosenstiel, Martin Land Fundamentals of Fixed Prosthodontics, 4th Edition, Herbert Shillingburg Jr., DDS Additional references are provided by lecturers. 					
		<p>8.1. Treatment Planning for Single and Multiple Missing Teeth*</p> <p>8.1.1 Discuss the strategies for the selection of the type of prosthesis [K].</p> <p>8.1.2 Discuss biomechanical considerations [K].</p> <p>8.1.3 Explain the solutions for the most common problems in treatment planning [K].</p> <p>8.1.4 Discuss the options for replacing missing teeth in the anterior or posterior area. [C].</p>	✓			PCC WSA	PCCT Part I Part II EYPT CBD AA
		<p>8.2 Resin-Bonded FD</p> <p>8.2.1 List the advantages and disadvantages of resin-bonded FPD [K].</p> <p>8.2.2 Discuss the technique for preparation of abutment teeth for resin-bonded FPD. [C].</p> <p>8.2.3 List the types of resin-bonded FPD [K].</p>		✓		WSA	Part I Part II EYPT CBD AA

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>8.3 Cantilever FDP</p> <p>8.3.1 List the advantages and disadvantages of cantilever FPD [K].</p> <p>8.3.2 State the factors that can influence the success of cantilever FPD [K].</p> <p>8.3.3 Review recent studies demonstrating the success of cantilever FPD. [C].</p>		✓		WSA SDL	Part I Part II EYPT CBD AA
		<p>8.4 Pier Abutment</p> <p>8.4.1 Explain the concept of pier abutment [K].</p> <p>8.4.2 List the indications and contraindications for non-rigid connectors [K].</p>	✓			WSA SDL	Part I Part II EYPT CBD AA
		<p>8.5 Prosthetic Treatment of Dentition with Periodontal Disease</p> <p>8.5.1 Discuss modifications of tooth preparation for periodontally weakened teeth with regards to type and location of the finish line for anterior and posterior teeth [C].</p> <p>8.5.2 Discuss the factors affecting the likelihood of success or failure of prosthetic treatment for teeth with root resection [C].</p>		✓		WSA SDL	Part I Part II EYPT CBD AA
		<p>8.6 Principles of Tooth Preparation*</p> <p>8.6.1 Explain the concept of marginal integrity. Discuss preservation of the periodontium [C].</p>	✓			PCC SDL	PCCT Part I Part II



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>8.6.2 Explain the types of margin placement and margin designs [C].</p> <p>8.6.3 Discuss the mechanical considerations with regards to integrity and durability of the restoration [C].</p> <p>8.6.4 Recognize factors affecting the retention and resistance of a cemented restoration [C].</p>					EYPT CBD AA DOPS
		<p>8.7 Fluid Control, Soft Tissue Management, and Impression Techniques*</p> <p>8.7.1 Discuss the mechanical, chemomechanical, and electrosurgical methods used for soft tissue management [C].</p> <p>8.7.2 Discuss different types of impression techniques [C].</p>	✓			PCC SDL	PCCT Part I Part II EYPT CBD AA
		<p>8.8 Pontics and the Edentulous Ridge</p> <p>8.8.1 Recognize the Siebert Classification of Residual Ridge Deformities [K].</p> <p>8.8.2 List the different classifications of pontic design and their advantages and disadvantages [K].</p> <p>8.8.3 Discuss the indications and contraindications for various pontic designs [C].</p> <p>8.8.4 Discuss and outline the procedure for pretreatment assessment of pontic space [C].</p>		✓		WSA	Part I Part II EYPT CBD AA

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>8.9 Type of Post and Core*</p> <p>8.9.1 List the types of post and core according to their use, material composition, and technique [K].</p> <p>8.9.2 State the indications, contraindications, advantages, and disadvantages of each type [K].</p> <p>8.9.3 Describe the techniques used for fabrication, try-in, and cementation [C].</p>	✓			PCC WSA	PCCT Part I Part II EYPT CBD AA
		<p>8.10 Provisional Restoration*</p> <p>8.10.1 List the types and characteristics of the ideal provisional restoration [K].</p> <p>8.10.2 List the types and techniques of construction and cementation [K].</p> <p>8.10.3 Discuss critical areas in provisional restorations that maintain the health and position of the gingiva (marginal fit, contour, surface finish [C].</p>	✓			PCC SDL	PCCT Part I Part II EYPT CBD AA
		<p>8.11 Diagnostic Wax-up*</p> <p>8.11.1 State the value and purpose of dental wax-up [K].</p> <p>8.11.2 Describe the steps in diagnostic wax-up [C].</p>	✓			PCC WSA	PCCT Part I Part II EYPT CBD AA
		8.12 Try in, Adjustment, Polishing, and	✓			WSA	Part I



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>Cementation technique</p> <p>8.12.1 Describe the sequence of metal and porcelain try-in [C].</p> <p>8.12.2 Describe the cementation technique using different types of cementation [C].</p> <p>8.12.3 Apply the steps of try-in, adjustment, polishing, and cementation clinically [P].</p>					Part II EYPT CBD AA DOPS
		<p>8.13 Causes and Management of Failed Crowns and Fixed Partial Dentures</p> <p>8.13.1 Classify the types of fixed prosthesis failure as biological, mechanical, and esthetic [K].</p> <p>8.13.2 Estimate the results of an incorrect contact area, overextended crowns, a short crown, and incorrect contour [K].</p> <p>8.13.3 Identify factors effecting longevity of the crown [C].</p> <p>8.13.4 Describe the methods used for removal of a failing fixed prosthesis [C].</p> <p>8.13.5 Compare failures associated with single crowns, FPD, and all ceramic, resin-bonded, and post and core prostheses [C].</p>			✓	WSA	Part II EYPT CBD AA

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>8.14 Success and Complications of Ceramic Prostheses</p> <p>8.14.1 Present the clinical studies and failure percentages for various types of cracks in a ceramic prosthesis [K].</p> <p>8.14.2 Classify ceramic failures and discuss each type [C].</p>			✓	WSA	Part II EYPT CBD AA
		<p>Hands-on Training Session</p> <ol style="list-style-type: none"> 1. Use and interpret correctly all appropriate investigations (e.g., radiographic, vitality, hematologic and microbiologic tests, and appropriately articulated study casts) to diagnose oral problems. 2. Write down the diagnosis for selected clinical cases (selected clinical photographs and radiographic films). 3. Write a treatment plan for selected cases. 4. Write consultation letters for selected cases. 5. Write referral letters for selected cases 6. Perform an initial crown preparation. 7. Build up a core with composite and without a post 8. Prepare post space using peso reamer drills and a parapost system 	✓			HoW	CE DOPS



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		9. Cement different posts with different cement 10. Build up the core with different restorations 11. Build up post and core directly on the tooth using resin (Duralay or pattern resin GC) 12. Perform single crown preparations with different margin designs (mounted teeth). 13. Perform teeth preparation for FPD (mounted teeth). 14. Fabricate an appropriate provisional restoration. 15. Make a standard final impression. 16. Pour a final impression. 17. Construct proficient working casts with removable dies. 18. Perform die trimming and determine the finish line with red-blue pencil 19. Attend a demonstration by laboratory production staff on wax-up, investing, casting, and finishing and polishing cast restorations 20. Apply the try-in steps for metal and porcelain crowns (demonstration) 21. Use the staining kit for color modification and characterization (demonstration) 22. Cement porcelain-fused-to-metal crown					

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		with zinc phosphate (video) 23. Cement all-ceramic crown with resin cement (video)					
Module 9: Occlusion							
<p>This module provides a comprehensive understanding of the different concepts about occlusion and the principles thereof, including mandibular movement, angles, occlusal plane, and vertical dimension of occlusion. Moreover, it highlights the factors affecting the stability of occlusion and their role in successful treatment in the long term, and also provides an understanding of the function of the TMJ, the associated muscles and teeth, and how they work in harmony. Further, it trains residents on how to make jaw relation records for the different restorative cases, starting from simple restorations to full mouth rehabilitation, and how to diagnose and manage the different occlusal problems that arise. Topics within this module include the following:</p> <ul style="list-style-type: none"> ▪ Temporomandibular Joint Dysfunction. ▪ Classification of Occlusion.* ▪ Fundamentals of Occlusion.* ▪ Determinants of Occlusal Morphology. ▪ Articulators and Facebows.* ▪ Short Dental Arch. ▪ Trauma from Occlusion. ▪ Centric Relation. ▪ Interocclusal Records.* ▪ Mandibular Movements and Recording. ▪ Vertical Dimension of Occlusion ▪ Anterior Guidance. ▪ Occlusal Stability. 							



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<ul style="list-style-type: none"> ▪ Occlusal Equilibration and Selective Teeth Grinding. ▪ Dental Wear. ▪ Overview of Full Mouth Rehabilitation. ▪ Occlusal Appliances. ▪ Criteria for Success of Occlusal Treatment. <p>Main suggested resources:</p> <ul style="list-style-type: none"> • Fundamentals of Fixed Prosthodontics, 4th edition, Herbert T. Shillinburg • Functional Occlusion from TMJ to Smile Design, 1st Edition, Peter Dawson • Management of Temporomandibular Disorder and Occlusion, 8th Edition, Jeffrey Okeson • Additional references are provided by lecturers. 					
		9.1. Temporomandibular Joint Dysfunction					
		9.1.1 Discuss the function of the TMJ [C].					Part I
		9.1.2 Define disorders of the TMJ [K].					Part II
		9.1.3 Explain causes of TMJ dysfunction [C].		✓		WSA	EYPT
		9.1.4 List signs and symptoms of TMJ dysfunction [K].					CBD
		9.1.5 Perform a clinical examination for TMJ dysfunction [C].					AA
		9.2 Classification of Occlusion*					PCCT
		9.2.1 Explain the concept of occlusion [K].					Part I
		9.2.2 Identify the terminologies used to describe occlusion [K].	✓			WSA	Part II
		9.2.3 Classify the different types of occlusion [C].					EYPT
		9.3 Fundamentals of Occlusion *					CBD
		9.3.1 Define centric relation [K].	✓			PCC WSA	AA Part I

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		9.3.2 Explain the Bennett movement angle [C]. 9.3.3 Explain incisal guidance [C]. 9.3.4 Define occlusal plane, curve of Spee, and curve of Wilson [K]. 9.3.5 Discuss the causes of bruxism and clenching [K]. 9.3.6 Describe the management of bruxism and clenching [K]. 9.3.7 Recognize the categories of occlusion [K]. 9.3.8 Explain the types of occlusal interference [K].					Part II EYPT CBD AA
		9.4 Determinants of Occlusal Morphology 9.4.1 State the determinants of occlusal morphology [K]. 9.4.2 Discuss and correlate anterior and posterior controlling factors [C]. 9.4.3 Explain the vertical determinants of occlusal morphology [C]. 9.4.4 Describe the horizontal determinants of occlusal morphology [K]. 9.4.5 Outline the relationship between anterior and posterior controlling factors [K].		✓		WSA	Part I Part II EYPT CBD AA
		9.5 Articulators and Facebows*	✓			PCC	PCCT



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		9.5.1 Define the articulators [K]. 9.5.2 Identify uses of articulators in dental practice [K]. 9.5.3 List the types, advantages, and disadvantages of articulators [K]. 9.5.4 Describe the functions and limitations of articulators [C]. 9.5.5 Identify the facebow its types [K]. 9.5.6 Explain the functions of facebows [C]. 9.5.7 Describe the technique of utilizing facebows in jaw relationships [C].				WSA HoW	Part I Part II EYPT CBD AA
		9.6 Short Dental Arch 9.6.1 State the treatment options and alternatives for reduced dentition [C]. 9.6.2 Explain the basis of the short dental arch concept and attitudes towards a short dental arch [C]. 9.6.3 Discuss the indications and contraindications for a short dental arch [C].			✓	WSA	Part II EYPT CBD AA
		9.7 Trauma From Occlusion 9.7.1 Define occlusal trauma [K]. 9.7.2 Classify occlusal trauma [K]. 9.7.3 Explain the management strategies of occlusal trauma [C].			✓	WSA	Part II EYPT CBD AA
		9.8 Centric Relation (CR)		✓		WSA	Part I

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		9.8.1 Define CR and adapted centric posture [K]. 9.8.2 Outline the key points in determining CR including the pros and cons of each technique [C]. 9.8.3 Describe load testing for verification of CR [C]. 9.8.4 Explain the criteria for accuracy and reasons for error in recording CR [K]. 9.8.5 Describe the techniques for determining CR [C]. 9.8.6 Outline the clinical steps in determining and recording CR and facebow transfers [C].					Part II EYPT CBD AA
		9.9 Interocclusal Records* 9.9.1 Explain the existing tripod interocclusal record according to various clinical conditions [K]. 9.9.2 Compare the types of interocclusal record [K]. 9.9.3 Describe the techniques for recording CR [C]. 9.9.4 Discuss the drawbacks of some of the CR recording techniques [C].	✓			PCC WSA	PCCT Part I Part II EYPT CBD AA
		9.10 Mandibular Movements and Recording 9.10.1 List the factors regulating	✓	✓		WSA	Part I Part II



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>mandibular movements [K].</p> <p>9.10.2 Identify the basic mandibular movements and positions [K].</p> <p>9.10.3 Analyze the influence of condylar and incisal guidance during mandibular movements [K].</p> <p>9.10.4 Outline the methods for studying mandibular movements [C].</p> <p>9.10.5 Explain mandibular border movement, three-dimensional recording instrumentation, and pantographic tracing [C].</p>					EYPT CBD AA
		<p>9.11 Vertical Dimension of Occlusion (VDO)</p> <p>9.11.1 Define the vertical jaw and horizontal jaw relationship [K].</p> <p>9.11.2 Determine the causes of loss of the VDO [K].</p> <p>9.11.3 Describe the mechanical and physiological methods of determining VDO [C].</p> <p>9.11.4 Explain the effects of an increased vertical relationship/decreased interocclusal distance [C].</p> <p>9.11.5 Compare the different methods used for trial verification of VDO [C].</p>			✓	WSA	Part II EYPT CBD AA

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>9.12 Anterior Guidance</p> <p>9.12.1 Explain the concept of anterior guidance [K].</p> <p>9.12.2 Discuss the function of anterior guidance [C].</p> <p>9.12.3 Describe the importance of anterior guidance over condylar guidance [C].</p> <p>9.12.4 Discuss the major function of anterior guidance [C].</p> <p>9.12.5 Explain the role of anterior guidance as a control on occlusal posterior contours [C].</p> <p>9.12.6 Estimate the effect of anterior guidance on electromyographic activity in the elevator muscles [K].</p> <p>9.12.7 Discuss the four determinants of anterior form and position [C].</p> <p>9.12.8 Outline the criteria for the semi-adjustable articulator used to restore anterior guidance [C].</p> <p>9.12.9 Verify the relationship between anterior and condylar guidance [C].</p> <p>9.12.10 Differentiate between modification and re-establishment of anterior guidance [C].</p> <p>9.12.11 Describe the method for transferring occlusal anterior guidance to the articulator</p>		✓		WSA	Part II EYPT CBD AA



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		[K].					
		<p>9.13 Occlusal Stability</p> <p>9.13.1 Define the concept of stable occlusion [K].</p> <p>9.13.2 List the signs of stable and unstable occlusion [K].</p> <p>9.13.3 Identify the requirement for occlusal stability [K].</p> <p>9.13.4 Explain the treatment plan required for unstable occlusion [C].</p>		✓		WSA	Part I Part II EYPT CBD AA
		<p>9.14 Occlusal Equilibration and Selective Teeth Grinding</p> <p>9.14.1 Define occlusal equilibration [K].</p> <p>9.14.2 Explain the importance of occlusal equilibration [C].</p> <p>9.14.3 Identify the selective grinding concept and its indications [K].</p> <p>9.14.4 Describe the technique for a selective grinding procedure [C].</p> <p>9.14.5 Perform selective grinding in indicated clinical cases [P].</p>			✓	WSA	Part II EYPT CBD AA CE
		<p>9.15 Dental Wear</p> <p>9.15.1 Define dental wear [K].</p> <p>9.15.2 Recognize the types of dental wear [K].</p> <p>9.15.3 Become familiar with the wear index classification [K].</p>			✓	WSA	Part II EYPT CBD AA

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		9.15.4 Classify worn dentition according to location [K]. 9.15.5 Verify the effect of wear on occlusion [K]. 9.15.6 Discuss the diagnosis, prevention, and management of dental wear problems [C].					
		9.16 Overview of Full Mouth Rehabilitation 9.16.1 Define full mouth rehabilitation [K]. 9.16.2 Determine the indications of full mouth rehabilitation [K]. 9.16.3 Discuss the various occlusal concepts and philosophies pertaining to full mouth rehabilitation [C]. 9.16.4 Describe the steps involved in the process of full mouth rehabilitation [C]. 9.16.5 Classify the types of deep overbite and state their etiology [C]. 9.16.6 Identify the methods used to correct deep overbite problems [K]. 9.16.7 Assess the effect of excess overjet on occlusion [K]. 9.16.8 Decide the appropriate treatment for			✓	WSA	Part II EYPT CBD AA CE



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		extreme overjet problems [C].					
		<p>9.17 Occlusal Appliances</p> <p>9.17.1 Define occlusal appliances [K].</p> <p>9.17.2 List the types of occlusal appliances [K]. Mention the indications and appropriate selection of occlusal appliances [K].</p> <p>9.17.3 Describe the fabrication technique of occlusal appliances [K].</p>			✓	WSA	Part II EYPT CBD AA CE
		<p>9.18 Criteria For Success of Occlusal Treatment</p> <p>9.18.1 Outline the objectives of successful occlusal treatment [K].</p> <p>9.18.2 Describe the testing process for successful occlusal treatment [K].</p>			✓	WSA	Part II EYPT CBD AA CE
		<p>Hands-on Training Session</p> <ol style="list-style-type: none"> 1. Make maxillary and mandibular impressions. 2. Take the bite registration using different materials. 3. Use the facebow. 4. Pour upper and lower impressions using dental stone. 5. Check casts for accuracy and trim them. 6. Transfer the relationship of a patient's maxillary arch and TMJ to an articulator 	✓			HoW	CE OSCE

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		utilizing a facebow. 7. Mount diagnostic casts on a semi-adjustable articulator. 8. Adjust the setting of the articulator. 9. Mount extracted teeth on alginate impressions. 10. Pour alginate impressions with extracted teeth. 11. Analyze occlusion of the previously mounted casts. 12. Perform diagnostic wax-up. (Laboratory staff will demonstrate these procedures) 13. Adjust wax-up for selected cases.					
		Module 10: Dental Implants This module provides basic knowledge of dental implants and the skills necessary for diagnosis and planning treatment. Residents discuss the rationale for dental implants and the principle of osseointegration as well as the prosthetic components of implants, including types of dental implant and the concepts of biomechanics, occlusion of implant restoration, and an implant in the esthetic zone. Finally, the resident will gain some experience on how to maintain a dental implant. Topics within this module include the following: <ul style="list-style-type: none"> • Historical Overview of Dental Implantology, Types of Dental Implants, and the Concept of Osseointegration.* • Biomechanics, Biomaterials, and Surface Treatment of Dental Implants. • Occlusion of Implant Restoration. • Patient Selection for an Implant and Planning Treatment. • Evaluation of Radiographic Images in Patients Considering an Implant. 					



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<ul style="list-style-type: none"> • Treatment Planning for Single-Tooth Implant Testoration. • Implant in the Esthetic Zone. • Screw-Retained versus Cement-Retained Implant Restoration.* • Surgical Aspects of Implant Dentistry.* • Prosthetic Aspects of Implant Dentistry.* • Immediate Dental Implant Loading. • Implant-natural Tooth Connection. • Complications and Management of a Prosthetic Implant. • Treatment Planning for an Implant-supported Fixed Partial Denture. • Maintenance of a Dental Implant. <p>Main suggested resources:</p> <ul style="list-style-type: none"> • Contemporary Fixed Prosthodontics, 5th Edition by Stephen F. Rosenstiel & Martin F. Land. (2015) • Contemporary Implant Dentistry, 4th Edition by Carl E. Misch. (2020) • Oral rehabilitation with dental implants, N.U. Zitzmann and Scharer Volume III. (1997) • Additional references are provided by lecturers. 					
		<p>10.1. Historical Overview of Dental implantology, Types of Dental Implant, and the Concept of Osseointegration*</p> <p>10.1.1. Outline the history of implants and Dr. Branemark's breakthrough discovery of osseointegration. [K]</p> <p>10.1.2. Discuss the scientific basis for osseointegration, describe the types of bone and bone reaction,</p>	✓			PCC WSA	PCCT Part I Part II EYPT CBD AA SOE

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>and distinguish the difference between healing related to cortical bone and cancellous bone at the cellular level. [C]</p> <p>10.1.3. Identify the stages leading to integration. [K]</p> <p>10.1.4. Distinguish the difference between healing related to cortical bone and cancellous bone at the cellular level. [C]</p> <p>10.1.5. Identify the stages leading to integration. [K]</p> <p>10.1.6. Explain the biology of bony adaptation at the implant surface. [C]</p>					
		<p>10.2. Biomechanics, Biomaterials, and Surface Treatment of Dental Implants</p> <p>10.2.1. Discuss the biomechanical principles of implants and recognize the need for control of biomechanical loading on dental implants (moments, stress, and strain). [C]</p> <p>10.2.2. Identify forces and their components (moments, force transfer mechanisms, impact, and stress-strain relationships) and their influence on clinical decision-making and the treatment plan. [C]</p> <p>10.2.3. Explain the scientific rationale for</p>		✓		WSA	Part I Part II EYPT OSCE CBD AA SOE



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>the design of dental implants</p> <p>10.2.4. List types of surface coating. [K]</p> <p>10.2.5. Apply the biomechanical principles in a treatment plan. [P]</p>					
		<p>10.3. Occlusion of Implant Restoration</p> <p>10.3.1. Differentiate between implant occlusion and natural occlusion. [C]</p> <p>10.3.2. Discuss the basics and consequences of biomechanical overload, bone mechanics, force directions, and various occlusal schemes that contribute to the success of implant restorations. [C]</p> <p>10.3.3. Explain the importance of controlling the position, angulation, and occlusal force on the implant. [C]</p>		✓		WSA	Part I Part II EYPT CBD AA SOE
		<p>10.4. Patient Selection for an Implant and Planning Treatment</p> <p>10.4.1. Review medical and dental history; Recognize local, systemic, and behavioral risk factors. [C]</p> <p>10.4.2. State the steps in clinical and radiographic examination and explain the surgical and radiographic methods used to insert stents.</p> <p>10.4.3 Develop and apply treatment</p>		✓		WSA	Part I Part II EYPT CBD AA SOE

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		strategies. [C]					
		10.5. Evaluation of Radiographic Images in Patients Considering an Implant					
		10.5.1. List the necessary radiographic information needed. [K]					
		10.5.2. Describe the types of radiographic images needed to obtain the information required for implant planning. [C]					
		10.5.3. Describe the importance and sequence of radiographic monitoring for implant therapy. [C]	✓			WSA CE	Part I Part II EYPT CBD OSCE AA SOE
		10.5.4. Describe dental implant image-guided surgery. [K]					
		10.5.5. Interpret radiographs obtained by the cone-beam technique. [C]					
		10.5.6. Interpret different radiographic images for single or multiple implants. [P]					
		10.5.7. Identify the anatomic landmarks used to select the correct position for the implant. [P]					
		10.6. Treatment Planning for Single-tooth Implant Restoration					
		10.6.1. Outline the alternative treatments available for single-tooth replacement. [K]		✓		WSA	Part II EYPT CBD



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>10.6.2. Discuss the contraindications and limitations of a single-tooth implant. [C]</p> <p>10.6.3. Explain the orthodontic and occlusal considerations related to posterior implant treatment. [C]</p>					AA SOE
		<p>10.7. Implant in the Esthetic Zone</p> <p>10.7.1. Explain the general esthetic principles and related guidelines; Discuss esthetic considerations related to maxillary anterior implant restoration. [C]</p> <p>10.7.2. Recognize the role of the biological width on esthetic implant rehabilitation. [C]</p> <p>10.7.3. Analyze the clinical considerations that must be addressed when placing an implant in the esthetic zone. [C]</p>			✓	WSA	Part II EYPT CBD AA SOE
		<p>10.8. Screw-retained versus Cement-retained Implant Restoration*</p> <p>10.8.1. State the indications for screw-retained prosthetic restoration; State the indications for cement-retained prosthetic restoration; Explain the advantages and disadvantages of screw-retained and cement-retained prosthetic restoration. [C]</p>	✓			PCC WSA	PCCT Part I Part II EYPT CBD AA SOE

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		10.8.2. Select and utilize screw-retained implant restoration. [C] 10.8.3. Select and utilize cemented-retained implant restoration. [C]					
		10.9. Surgical Aspects of Implant Dentistry* 10.9.1. Describe the first surgical procedure. [K] 10.9.2. Describe the second surgical procedure. [K] 10.9.3. Explain the postoperative management. [C] 10.9.4. State the complications that can occur after this surgery. [K]	✓	✓		PCC WSA	PCCT Part I Part II EYPT CBD AA SOE
		10.10. Prosthetic aspects of Implant Dentistry* 10.10.1. Explain the steps involved in a fixed implant prosthesis for single-tooth replacement in the esthetic and posterior zones. [C] 10.10.2. Explain the steps involved in a fixed implant prosthesis for partially edentulous situations. [C] 10.10.3. Differentiate between prefabricated and customized healing abutments for soft tissue management. [C] 10.10.4. Discuss the types of implant temporization and techniques	✓		✓	PCC WSA HoW	PCCT Part I Part II EYPT CBD AA SOE OSCE



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>used. [C]</p> <p>10.10.5. Compare the different options for making an impression (closed versus open tray technique, and abutment versus fixture level impressions) [C]</p> <p>10.10.6. Describe the procedures for bite registration, abutment selection, (plan sit), torquing, and insertion. [C]</p> <p>10.10.7. Develop a treatment plan for complex implant cases. [P]</p> <p>10.10.8. Describe the process of full mouth rehabilitation using dental implants. [C]</p> <p>10.10.9. Discuss the use of implants for growing patients. [C]</p> <p>10.10.10. Make a final impression with a closed try (at the abutment and fixture level). [P]</p> <p>10.10.11. Make a final impression with an open try at the fixture level. [P]</p>					
		<p>10.10.12. Immediate Dental Implant Loading State the rationale for immediate implant loading. [K]</p> <p>10.10.13. List the guidelines for immediate loading. [K]</p>			✓	WSA	Part II EYPT CBD AA

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>10.10.14. Determine factors that decrease the risk of immediate occlusal loading. [C]</p> <p>10.10.15. Explain the advantages and disadvantages of non-functional immediate loading; Justify the risk of immediate occlusal loading. [C]</p>					OSCE SOE
		<p>10.11. Implant-natural Tooth Connection</p> <p>10.11.1. Evaluate the natural abutment appropriately. [C]</p> <p>10.11.2. Distinguish biomechanical differences in movement between an implant and a natural tooth. [C]</p> <p>10.11.3. Recognize the difference in supporting mechanisms. [C]</p> <p>10.11.4. State the advantages and disadvantages of connecting a tooth to an implant. [K]</p> <p>10.11.5. Justify the potential risk of connecting a tooth to an implant. [C]</p> <p>10.11.6. Describe the connection method. [C]</p>			✓	WSA	Part II EYPT CBD AA OSCE SOE
		<p>10.12. Complications and Management of a Prosthetic Implant</p> <p>10.12.1. Discuss the biological complications, i.e., incident rate, etiology, and solutions [K].</p>			✓	WSA CE	Part II EYPT CBD AA



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>10.12.2. Discuss the mechanical complications, i.e., incident rate, etiology, and solutions; Discuss the esthetic complications, i.e., incident rate, etiology, and solutions. [C]</p> <p>10.12.3. Estimate and recognize complications of a prosthetic implant in a case. [P]</p>					OSCE SOE
		<p>10.13. Treatment Planning for an Implant-supported Fixed Partial Denture</p> <p>10.13.1. Discuss the prosthetic options; Classify the prosthetic movements; State the advantages of an implant supported FPD. [C]</p> <p>10.13.2. Describe the preloading and parameters affecting preloading. [C]</p> <p>10.13.3. Identify a passive casting material and factors influencing fabrication. [C]</p>		✓		WSA	Part I Part II EYPT CBD AA OSCE SOE
		<p>10.14. Maintenance of a Dental Implant</p> <p>10.14.1. Recognize the periodontal aspects of a dental implant; Define peri-implantitis; Discuss the consequences of peri-implantitis. [C]</p>			✓	WSA CE	Part II EYPT CBD AA OSCE

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		10.14.2. Explain the hygiene protocol and instrumentation; List the chemotherapeutic agents used. [C] 10.14.3. Define the Implant Crown Aesthetic Index. [K] 10.14.4. Examine implant cases and identify any complications. [P] 10.14.5. Manage complications in implant cases. [P]					SOE
		Hands-on training session* <ul style="list-style-type: none"> • Discuss the surgical components of an implant (video). • Discuss the prosthodontics component of an implant (video). • Perform a final impression for an implant using the open tray technique. • Perform a final impression for an implant using the closed tray technique. • Perform torqueing on the screwed-type crown. • Perform torqueing on the abutment. 	✓			HoW	OSCE CE
Module 11: Restorative-Periodontal Interrelationship							
This module provides basic knowledge of the relationship between periodontal tissues and types of restorative procedures that will have an impact on the long-term success of a restoration. Topics within this module include the following: <ul style="list-style-type: none"> • Introduction to Periodontics* • Gingival Esthetics 							



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<ul style="list-style-type: none"> Gingival Health Consideration of Restorative Treatment Gingival Health and Esthetics Considerations of Provisional Restoration Interproximal Embrasures <p>Main suggested resources:</p> <ul style="list-style-type: none"> Fundamentals of Fixed Prosthodontics, 4th Edition: Chapter 19: Wax patterns Esthetic Rehabilitation in Fixed Prosthodontics, Volume 1: Esthetic Analysis: A Systematic Approach to Prosthetic treatment Esthetic Rehabilitation in Fixed Prosthodontics, Volume 2: Prosthetic Treatment: A Systematic Approach to Esthetic, Biologic and Functional Integration Becker CM, Kaldahl WB. (2005 Feb). Current theories of crown contour, margin placement, and pontic design. 1981. S J Prosthet Dent. 93(2):107-15. Croll BM. (1989). Part I: Emergence Profiles in Natural Tooth Contours: Photographic Observations. J Pr Prosthet Dent 62:4. Croll BM. (1990). Part II: Emergence Profiles in Natural Tooth Contours: Clinical Considerations. J Prosthet Dent 63:374. Jameson, L.M. and Malone, W.F.P. (1982). Crown contours and gingival response. J Prosthet Dent 47:620-624. Linkow, L. (1962). Contact areas in natural dentitions and fixed prosthodontics. J Prosthet Dent 12:132-137. Additional references are provided by lecturers. 					
		11.1. Introduction to Periodontics*					PCCT
		11.1.1. Describe components of periodontal apparatus and gingival biotypes and their significance [K].	✓			PCC WSA SDL	Part I Part II
		11.1.2. Explain the local factors contributing to different type of periodontal disease [K].					EYPT AA SOE

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>11.1.3. Discuss systemic and local impact of individual risk factors on the periodontal prognosis [K].</p> <p>11.1.4. Describe mucogingival problems [K].</p> <p>11.1.5. Define gingival recession, etiology, and classification [C].</p> <p>11.1.6. List main bone grafting materials and membrane [K].</p>					CBD
		<p>11.2. Gingival Esthetics</p> <p>11.2.1. Identify the supra-crestal connective tissue, the junctional epithelium, and the sulcus [K].</p> <p>11.2.2. List the anatomic components of the gingiva [K].</p> <p>11.2.3. Clarify the impact of contact points on esthetics, explaining the Tarnow effect, tooth shape, and black triangles [C].</p> <p>11.2.4. Explain the association between interdental papilla and extraction, diastema, gingiva biotype, and implant in relation to contact area and esthetics [C].</p> <p>11.2.5. Correlate tooth position and gingival progression in three planes [C].</p> <p>11.2.6. Define the gingival aesthetic line and gingival aesthetic angle [K].</p> <p>11.2.7. List the four classes of gingival aesthetic line [K].</p>	✓			WSA SDL	Part I Part II EYPT AA SOE CBD



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>11.2.8. Recognize excessive gingival display [K].</p> <p>11.2.9. Identify different gingival esthetic treatment modalities including: gingivectomy, crown lengthening, cosmetic periodontal surgery, grafts, guided tissue regeneration, orthodontic excursion/intrusion, ridge augmentation, and orthognathic surgery [K].</p> <p>11.2.10. Appraise the different periodontal esthetic problems and its management modalities including violation of supra crestal attachment (biological width), gingival asymmetry, and excessive gingival display [C].</p> <p>11.2.11. Describe the osseous crest and explain its importance [K].</p>					
		<p>11.3. Gingival Health Considerations of Restorative Treatment</p> <p>11.3.1. Recognize the supra crestal attachment (biologic width) and its different variations [K].</p> <p>11.3.2. Recognize the signs of biologic width violation and its consequences [C].</p> <p>11.3.3. Explain the biologic width assessment method with regards to restorability [C].</p>	✓			WSA SDL	Part I Part II EYPT AA SOE CBD

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>11.3.4. Describe the procedures used to correct biologic width violation (crown lengthening vs orthodontic) [K].</p> <p>11.3.5. Compare and contrast between crown lengthening and orthodontic procedures [C].</p> <p>11.3.6. Identify relevant records and preparatory procedures for cases indicated for biological width correction [K].</p> <p>11.3.7. List types of marginal placement: supragingival, equigingival, subgingival [K].</p> <p>11.3.8. Discuss the margin placement guideline including reasons for extending margins subgingivally [C].</p> <p>11.3.9. Describe the role of marginal fit on gingival health [K].</p> <p>11.3.10. Explain the effect of crown contour (emergence profile, height of contour, embrasures, and overhang) on gingival health [C].</p> <p>11.3.11. Rationalize between restorative management versus extraction decision and implant [C].</p>					
		11.4. Gingival Health and Esthetics Considerations of Provisional		✓		WSA SDL	Part I Part



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>Restoration</p> <p>11.4.1. Explain the effect of different provisionals on gingival health [K].</p> <p>11.4.2. Discuss critical areas in provisional restoration that maintain the health and position of the gingiva (marginal fit, contour, surface finish) [C].</p> <p>11.4.3. Explain the meaning of emergence profile and its significance in gingival esthetics and health [C].</p> <p>11.4.4. Recognize the role of provisional restoration to gingival esthetics [C].</p> <p>11.4.5. Recognize the consequences of faulty provisional restorations[C].</p>					<p>II</p> <p>EYPT</p> <p>AA</p> <p>SOE</p> <p>CBD</p>
		<p>11.5. Interproximal Embrasures</p> <p>11.5.1. Explain how to manage interproximal embrasures (natural tooth and implant) [C].</p> <p>11.5.2. Clarify the relationship between gingival embrasure volume and papillary formation [K].</p> <p>11.5.3. Describe the surgical methods used to alter gingival embrasures [C].</p> <p>11.5.4. Explain the restorative correction techniques used for open gingival embrasures [C].</p>		✓		<p>WSA</p> <p>SDL</p>	<p>Part I</p> <p>Part II</p> <p>EYPT</p> <p>AA</p> <p>SOE</p> <p>CBD</p>

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>Module 12: Scientific Research</p> <p>This module communicates the principles of scientific research. It is designed to improve many skills, including scientific thinking, teamwork, and professional communication skills. Residents will have a chance to conduct a research project and present their findings in a written or oral format. Topics within this module include the following:</p> <ul style="list-style-type: none"> • Introduction to Scientific Research.* • Ethics in Scientific Research.* • Literature Review.* • Research Problem and Objectives.* • Introduction to Referencing.* • Study Design and Research Methodology.* • Type of Variables, Confounding, Modifiers, Sampling Technique, and Data Collection, Institutional Review Board (IRB).* • Questionnaires and Standardized measurement.* • Qualitative Study Design.* • Biostatistics.* • Research Proposal.* • Discussion.* • Conclusion, Abstract, Title, Authorship, Acknowledgements, Publication, Poster Presentation.* • Research Grants.* <p>Main suggested resources:</p> <ul style="list-style-type: none"> • Gordis Epidemiology, 6th Edition by David D Celentano & Moyses Szklo. (2018) • Introductory Statistics 1st Edition, by Barbara Illowsky, Susan Dean OpenStax. (2013) • Additional references are provided by lecturers. 					
		12.1. Introduction to Scientific Research*	✓			PCC	

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		12.1.1. Define research and discuss its importance [C]. 12.1.2. List the various types of research [K]. 12.1.3. Explain the meaning of evidence-based dentistry [C]. 12.1.4. List the steps for conducting research and identify skills needed to design and conduct research [C]. 12.1.5. Recognize sources of information, articles, and data [K]. 12.1.6. Open an account in PubMed [P].					PCCT Assig
		12.2. Ethics in Scientific Research* 12.2.1. Recognize research ethics [K]. 12.2.2. Present the principles of the Declaration of Helsinki (ethics) [K]. 12.2.3. Present the principles of the Belmont Report (ethics) [P]. 12.2.4. Discuss the selection of a research group and/or supervisor.	✓			PCC SDL	PCCT Assig
		12.3. Literature Review* 12.3.1. Describe the meaning of a literature review and discuss the importance of a literature review [K]. 12.3.2. List the steps in conducting a literature review [C]. 12.3.3. Apply methods for writing the introduction part of the manuscript [P].	✓			PCC	PCCT Assig

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		12.3.4. Critique a literature review of published articles [P].					
		<p>12.4. Research Problem and Objectives*</p> <p>12.4.1. Define the research problem and purpose and explain the importance of the research problem [K].</p> <p>12.4.2. Identify the purpose statements, research questions, hypotheses, and objectives [C].</p> <p>12.4.3. Formulate a hypothesis, formulate the research objective, and discuss the process of developing a research question [C].</p> <p>12.4.4. Apply methods of writing to the research objective and critique the research objectives of published articles [P].</p>	✓			PCC	PCCT Assig
		<p>12.5. Introduction to Referencing*</p> <p>12.5.1. Define a reference and a citation [K].</p> <p>12.5.2. List the different types of referencing style [K].</p> <p>12.5.3. Recognize the meaning of plagiarism [K].</p> <p>12.5.4. Write statements/a paragraph with citations and references [P].</p> <p>12.5.5. Attend a hands-on EndNote workshop [P].</p>	✓			PCC	PCCT Assig



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>12.6. Study Design and Research Methodology*</p> <p>12.6.1. Describe the characteristics of quantitative, qualitative, and mixed methods research [K].</p> <p>12.6.2. Explain a quantitative study design (research methodology) [K].</p> <p>12.6.3. Describe descriptive and analytic studies [K].</p> <p>12.6.4. Describe experimental research, quasi-experimental, and non-experimental quantitative research. [K]</p> <p>12.6.5. Discuss the steps involved in conducting experimental research. [C]</p> <p>12.6.6. Explain the meaning and uses of correlational research. [C]</p> <p>12.6.7. Explain the meaning of causation and association research. [C]</p> <p>12.6.8. Critique study designs in published articles. [P]</p>	✓			PCC	PCCT Assig
		<p>12.7. Type of Variables, Confounding, Modifiers, Sampling Technique, and Data collection, Institutional Review Board (IRB)*</p> <p>12.7.1. List types of variables. [K]</p>	✓			PCC	PCCT Assig

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		<p>12.7.2. Define confounding and modifier variables. [K]</p> <p>12.7.3. List types of bias in research. [K]</p> <p>12.7.4. Discuss the process of quantitative data collection. [K]</p> <p>12.7.5. Explain sampling techniques. [C]</p> <p>12.7.6. Explain how to obtain a study sample. [C]</p> <p>12.7.7. List the types of data collection tools (instruments to be used to collect data). [K]</p> <p>12.7.8. Define the different methods of data collection (tests, questionnaires, interviews, focus groups, observation). [K]</p> <p>12.7.9. Critique types of variables and sampling techniques in published articles. [C]</p> <p>12.7.10. Discuss the process of IRB approval for research projects. [C]</p>					
		<p>12.8. Questionnaires and Standardized Measurement*</p> <p>12.8.1. Discuss different types of questionnaires. [C]</p> <p>12.8.2. List the steps for construction of an instrument (questionnaire). [K]</p>	✓			PCC	PCCT Assig



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		12.8.3. Identify standardized measurements and assessment techniques (e.g., scales, validity, and reliability). [C] 12.8.4. Discuss methods for administering the tools for data collection. [C]					
		12.9. Qualitative Study Design* 12.9.1. Identify qualitative study design (grounded theory research, ethnographic research, narrative research). [C] 12.9.2. Explain the processes of qualitative data collection. [C] 12.9.3. Discuss how to analyze and interpret qualitative data. [C]	✓			PCC	PCCT Assig .
		12.10. Biostatistics* 12.10.1. Identify the basics of biostatistics. [C] 12.10.2. Explain how to interpret quantitative data. [C] 12.10.3. Explain the data management process. [C] 12.10.4. Discuss the process of quantitative data analysis. [C] 12.10.5. Conduct a descriptive analysis. [P] 12.10.6. Conduct an inferential analysis. [P] 12.10.7. Describe how to analyze the data. [C]	✓			PCC	PCCT Assig .

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		12.10.8. Describe how to report the results: tables, figures, and presenting in text. [C] 12.10.9. Gain familiarity with the use of the SPSS program (attend a hands-on workshop). [P]					
		12.11. Research Proposal* 12.11.1. Describe the content of the research proposal. [K] 12.11.2. Apply the above-mentioned methods of writing. [P]	✓			PCC	PCCT Assig .
		12.12. Discussion* 12.12.1. Identify the content of the discussion section. [K] 12.12.2. Discuss the methods used to write the above discussion. [P]	✓			PCC	PCCT Assig .
		12.13. Conclusion, Abstract, Title, Authorship, Acknowledgements, Publication, Poster Presentation* 12.13.1. Identify the content of the conclusion. [K] 12.13.2. Identify the content of the abstract. [K] 12.13.3. List the types of titles. [K] 12.13.4. State how to arrange authorship. [K] 12.13.5. Describe how to write acknowledgements. [K] 12.13.6. Explain the process of publication. [C]	✓			PCC	PCCT Assig .



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level			Instruction	Assessment
			R1 - junior	R2 - junior	R3 - senior		
		12.13.7. Discuss how to design the poster. [C]					
		12.14. Research Grants* 12.14.1. Explain the process of applying for a research grant. [C]	✓			PCC	PCCT Assig.
		12.15. Critique Articles* 12.15.1 Discuss the steps in critiquing research. [C]	✓			PCC	PCCT Assig.

Communicator

As communicators, SBRD residents form relationships with patients and their families that facilitate the gathering and sharing of essential information for effective dental health care.

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level	
			R1 & R2 junior	R3 senior
1	Establish professional therapeutic relationships with patients and their families	1.1 Communicate using a patient-centered approach that encourages patients' trust and autonomy and is characterized by empathy, respect, and compassion. 1.1.1. Apply psychologic and behavioral principles in patient-centered communication. 1.1.2. Take time to talk and listen to dental patients to understand them better and improve the clinical relationship.	✓	✓

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level	
			R1 & R2	R3 senior
		1.1.3 Provide direct and close contact with patients characterized by honesty and empathy to create a therapeutic alliance based on trust and respect.		
		1.2 Optimize the physical environment for the patient's comfort, dignity, privacy, engagement, and safety. 1.2.1. Show concern about patient privacy and comfort. 1.2.2. Apply all the safety standards needed.	✓	✓
		1.3. Recognize when the values, biases, or perspectives of patients, dentists, or other dental health care professionals may have an impact on the quality of care and modify the approach to the patient accordingly.	✓	✓
		1.1. Respond to a patient's non-verbal behaviors to enhance communication. 1.1.1. Recognize and appropriately manage anxious or fearful dental patients. 1.1.2. Recognize and respect the dental patient's need for privacy.	✓	✓
		1.2. Manage disagreements and emotionally charged conversations. 1.2.1. Respect each patient's perspectives, situation, concerns, and values and give alternative treatment plans. 1.2.2. Break bad news in an empathetic manner.	✓	✓
		1.3. Adapt to the unique needs and preferences of each patient and to his/her clinical conditions and circumstances.	✓	✓
2	Elicit and synthesize	2.1. Use patient-centered interviewing skills to gather relevant biomedical, dental, and psychological	✓	✓



SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level	
			R1 & R2	R3 senior
	accurate and Relevant information, incorporating the perspectives of patients and their families	information. 2.1.1 Encourage and facilitate the dental patient to take the conversational lead and initiate topics in the area of their complaints, symptoms, experience, worries, values, and preferences.		
		2.2. Provide a clear structure for and manage the flow of an entire patient encounter.	✓	✓
		2.3. Seek and synthesize relevant information from other sources including the patient's family, with the patient's consent. 2.3.1. Collect the relevant necessary information from the family, previous dentists, or other dental specialists, the patient's physician (if related to a medical issue), and other professionals, with the patient's permission. 2.3.2. Act professionally when screening for sensitive information.	✓	✓
3	Share dental health care information and plans with patients and their families	3.1 Share information and explanations that are clear, accurate, and timely, while checking for patient and family understanding. 3.1.1 Use language that is easily comprehended and matches the patient's requirements and expectations. 3.2 Utilize new technology to facilitate understanding of information and explaining dental treatment plans. 3.3 Disclose harmful patient safety incidents to patients and their families accurately and appropriately.		
4	Engage patients and their families in developing	4.1 Facilitate discussion with patients and their families in a way that is respectful, non-judgmental, and culturally safe. 4.2 Assist patients and their families to identify, access, and		

SN	Key Competencies (Residents are able to...)	Enabling Competencies (Residents are able to...)	Resident Level		
			R1 & R2	junior	R3 senior
	plans that reflect the patient's dental health care needs and goals	<p>make use of information and communication technologies to support their treatment plan, dental care, and manage their dental health.</p> <p>4.3 Use communication skills and strategies that help patients and their families to make informed decisions regarding their dental health.</p>			
5	Document and share written and electronic information about the clinical encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy	<p>5.1 Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with regulatory and legal requirements.</p> <p>5.2 Communicate effectively using a written dental and medical health record, electronic dental and medical record, or other digital technology.</p> <p>5.3 Share information with patients and others in a manner that respects patient privacy and confidentiality and enhances understanding.</p>			

Collaborator

As collaborators, SBRD residents work effectively with other dental health care professionals to provide safe and high-quality, patient-centered care.



SN	Key competencies (Residents are able to)	Enabling competencies (Residents are able to)	Junior (R1&R2)	Senior (R3)
1	Work effectively with dentists, physicians, and other colleagues in the dental health care professions	1.1 Establish and maintain a positive relationship with dentists, physicians, and other colleagues in the dental health care professions to support relationship-centered collaborative care.	✓	✓
		1.1.1 Participate in intraprofessional (among dental colleagues) and interprofessional (among other dental and medical health care professionals) relationships and teamwork.	✓	✓
		1.1.2 Work with other health care professionals and dental specialists to integrate care at the individual and community levels.	✓	✓
		1.1.3 Apply the principles of team dynamics.	✓	✓
		1.1.4 Engage in continuous intraprofessional and interprofessional development to enhance team performance.	✓	✓
		1.2 Negotiate overlapping and shared responsibilities with dentists and other health care professionals during episodic and ongoing care.	✓	✓
		1.2.1 Recognize one's own professional role and responsibilities and those of others, including dental assistants, laboratory technicians, radiologists, hygienists, and other dental and medical specialties.	✓	✓
		1.3 Engage in respectful shared decision-making with dentists and other colleagues in the dental health care professions.	✓	✓
		2	Work with dentists and other colleagues in the dental health care professions to	2.1 Show respect towards collaborators.
2.1.1 Encourage the opinions and ideas of other interprofessional and intraprofessional dental health care team members.	✓			✓

SN	Key competencies (Residents are able to)	Enabling competencies (Residents are able to)	Junior (R1&R2)	Senior (R3)
	promote understanding, manage differences, and resolve conflicts	2.1.2 Respect the roles and limitations of other professionals.	✓	✓
		2.2 Implement strategies to promote understanding, manage differences, and resolve conflicts in a manner that supports a collaborative culture.		✓
		2.2.1 Value diversity among dental professionals.		✓
		2.2.2 Use constructive negotiation.		✓
		2.2.3 Describe strategies for conflict resolution on the team.		✓
		2.2.4 Give timely and sensitive instructive feedback to others and respond respectfully and professionally to feedback from others.		✓
3	Hand over the care of dental patients to another dental health care professional when necessary to facilitate continuity of safe patient care	3.1 Determine when care should be transferred to another dentist or dental health care professional.	✓	✓
		3.1.1 Recognize one's own limitations and know when to seek help from others.	✓	✓
		3.2 Demonstrate handover of care, using both verbal and written communication, during a patient transition to a different dental health care professional, setting, or stage of care.	✓	✓
		3.2.1 Write appropriate referral and consultation request forms.	✓	✓

Leader

As leaders, SBRD residents engage with others to contribute to the vision of a high-quality dental health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers.



Key competencies			Junior	Senior
S N	(Residents are able to)	Enabling competencies:(Residents are able to)	(R1&R2)	(R3)
1	Contribute to improved delivery of dental health care in teams, organizations, and systems	1.1 Apply the science of quality improvement to contribute to improving systems of patient care.		✓
		1.2 Contribute to a culture that promotes patient safety.	✓	✓
		1.3 Analyze patient safety incidents to enhance systems of care.	✓	✓
		1.4 Use health informatics to improve the quality of patient care and optimize patient safety.	✓	✓
2	Engage in the stewardship of dental care resources	2.1 Allocate dental care resources for optimal patient care.	✓	✓
		2.2 Apply evidence and management processes to achieve cost-appropriate care.		✓
3	Demonstrate leadership in professional practice	3.1 Demonstrate leadership skills to enhance dental care.	✓	✓
		3.2 Facilitate change in dental health care to enhance services and outcomes.		✓
4	Manage career planning, finances, and human resources in a dental practice	4.1 Set priorities and manage time to integrate practice and personal life.	✓	✓
		4.2 Manage a career and a practice.	✓	✓
		4.3 Implement processes to ensure Improvement in personal practice.		✓

Health Advocate

As health advocates, SBRD residents contribute their expertise and influence as they work within communities or patient populations to improve dental health. They work with those they serve to determine and understand needs, speak on behalf of others when required, and support the mobilization of resources to affect change.

SN	Key competencies Residents are able to:	Enabling competencies Residents are able to:	Junior (R1&R2)	Senior (R3)
1	Respond to an individual patient's dental health needs by advocating for the patient within and beyond the clinical environment	1.1 Work with patients to address determinants of dental health that affect them and their access to necessary dental health services or resources.	✓	✓
		1.2 Work with patients and their families to increase opportunities to adopt healthy dental behaviors.	✓	✓
		1.3 Incorporate prevention, promotion, and surveillance of oral health into interactions with individual patients.	✓	✓
2	Respond to the needs of the community or populations served by advocating for system-level change in a socially accountable manner	2.1 Work with a community or population to identify the determinants of oral health that affect its members.		
		2.2 Improve clinical practice by applying a process of continuous quality improvement to the prevention, promotion, and surveillance of oral health.		✓
		2.3 Contribute to the process of improving oral health in the community or population served.		✓

Scholar

As scholars, SBRD residents demonstrate a lifelong commitment to excellence in practice through continuous learning and by teaching others, evaluating evidence, and contributing to scholarship.

SN	Key competencies (Residents are able to)	Enabling competencies (Residents are able to)	Junior (R1&R2)	Senior (R3)
1	LIFELONG LEARNING Engage in continuous enhancement of professional activities through	1.1 Develop, implement, monitor, and revise a personal learning plan to enhance professional practice.	✓	✓
		1.2 Identify opportunities for learning and improvement by regularly reflecting on and assessing personal performance using various internal and external data sources.	✓	✓



SN	Key competencies (Residents are able to)	Enabling competencies (Residents are able to)		Junior (R1&R2)	Senior (R3)
	ongoing learning	1.3	Engage in collaborative learning to improve personal practice and contribute to collective improvements in practice in an ongoing way.	✓	✓
		1.3.1	Learn from and make use of the expertise of other dentists or dental health care professionals.	✓	✓
2	TEACHER Teach students, residents, the public, and other health care professionals	2.1	Recognize the influence of role modeling and the impact of the formal, informal, and hidden curriculum on learners.		✓
		2.1.1	Participate in teaching with dental students, interns, residents, or colleagues.		
		2.2	Promote a safe learning environment.	✓	✓
		2.3	Ensure patient safety is maintained when learners are involved.	✓	✓
		2.4	Plan and deliver a learning activity.		✓
		2.5	Provide feedback to enhance learning and performance.		✓
		2.6	Assess and evaluate learners, teachers, and programs in an educationally appropriate manner.		✓
3	EVIDENCE-INFORMED DECISION-MAKING Integrate best available evidence into practice	3.1	Recognize uncertainty in clinical practice and knowledge gaps in clinical and other professional encounters, and generate focused questions that address them.		✓
		3.2	Identify, select, and navigate pre-appraised resources.	✓	✓
		3.3	Critically evaluate the integrity, reliability, and applicability of health-related research and literature.	✓	✓
		3.4	Integrate evidence into decision-making in clinical practice.	✓	✓

SN	Key competencies (Residents are able to)	Enabling competencies (Residents are able to)		Junior (R1&R2)	Senior (R3)
4	RESEARCH Contribute to the creation and dissemination of knowledge and practices applicable to health	4.1	Demonstrate an understanding of the scientific principles of research and scholarly inquiry and the role of research evidence in health care.	✓	✓
		4.2	Identify ethical principles for research and incorporate them into obtaining informed consent, considering potential harms and benefits, and considering vulnerable populations.	✓	✓
		4.3	Contribute to the work of a research program.	✓	✓
		4.4	Pose questions amenable to scholarly inquiry and select appropriate methods to address them.	✓	✓
		4.5	Summarize and communicate to professional and lay audiences, including patients and their families, the findings of relevant research and scholarly inquiry.	✓	✓



Professional

As professionals, SBRD residents are committed to the dental health and well-being of individual patients and society through ethical practice, high personal standards of behavior, accountability to the profession and society, dentist-led regulation, and maintenance of personal oral health.

SN	Key competencies Residents are able to:	Enabling competencies Residents are able to:	Junior (R1&R 1)	Senior (R3)
1	COMMITMENT TO PATIENTS Demonstrate a commitment to patients by applying best practices and adhering to high ethical standards	1.1 Exhibit appropriate professional behavior and relationships in all aspects of practice, demonstrating honesty, integrity, humility, commitment, compassion, respect, altruism, respect for diversity, and maintenance of confidentiality.	✓	✓
		1.1.1 Put patients' interests before their own or those of any colleague, organization, or business.	✓	✓
		1.1.2 Manage information about patients as confidential and use it for the purposes for which it is given.	✓	✓
		1.1.3 Keep information secure at all times.	✓	✓
		1.1.4 In special cases, it may be justified to make confidential patient information known without consent if it is in the public interest or the patient's interests.	✓	✓
		1.1.5 Maintain appropriate boundaries in relationships with patients and without abusing those relationships.	✓	✓
		1.2 Demonstrate a commitment to excellence in all aspects of practice.	✓	✓
		1.3 Recognize and respond to ethical issues encountered in practice.	✓	✓
		1.3.1 Reject politely any payment, gift, hospitality, and request to make or accept any referral that may affect professional judgment.	✓	✓
		1.3.2 Treat patients politely and with respect, in recognition of their dignity and rights as individuals.	✓	✓

SN	Key competencies Residents are able to:	Enabling competencies Residents are able to:	Junior (R1&R 1)	Senior (R3)
		1.3.3 Recognize and promote the patient's responsibility for making decisions about oral and dental treatment.	✓	✓
		1.3.4 Treat patients fairly and in line with the law.	✓	✓
		1.4 Recognize and manage conflicts of interest.		✓
		1.5 Display professional behavior in the use of technology-enabled communication.		✓
2	COMMITMENT TO SOCIETY Demonstrate a commitment to society by recognizing and responding to societal expectations in oral health care	2.1 Demonstrate accountability to patients, society, and the profession by responding to societal expectations of dentists.	✓	✓
		2.2 Demonstrate a commitment to patient safety and quality improvement.	✓	✓
3	COMMITMENT TO PROFESSION Demonstrate a commitment to the profession by adhering to standards and participating in	3.1 Fulfill and adhere to the professional and ethical codes, standards of practice, and laws governing dental practice.	✓	✓
		3.1.1 Recognize laws and regulations that affect a dentist's work, premises, equipment, and business, and follow them.	✓	✓
		3.2 Recognize and respond to unprofessional and unethical behaviors in dentists and other colleagues in the health care profession.	✓	✓
		3.2.1 Treat all team members and other colleagues fairly and in line with the law without discrimination.	✓	✓
		3.3 Participate in peer assessment and setting of standards.		✓



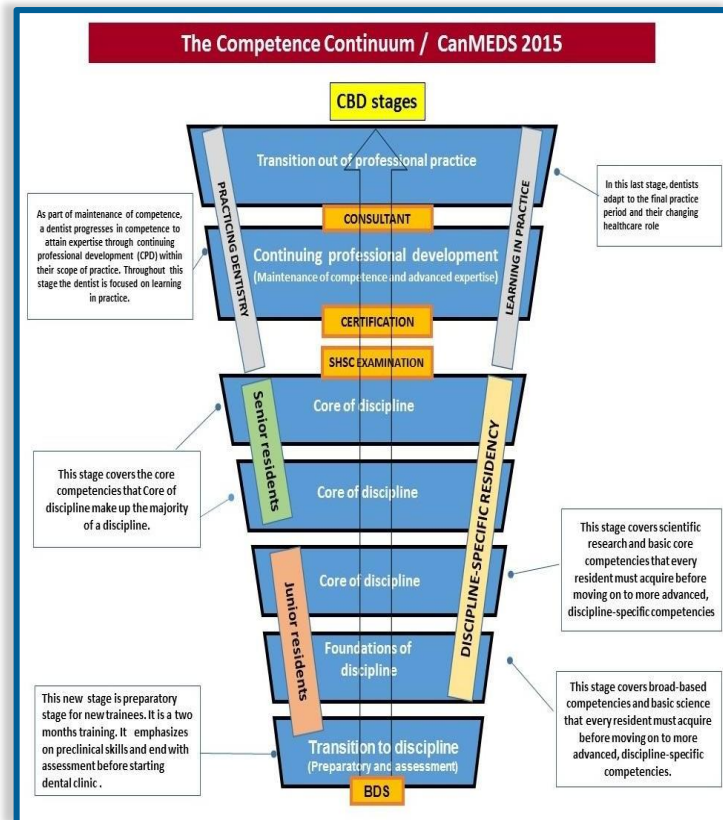
SN	Key competencies Residents are able to:	Enabling competencies Residents are able to:	Junior (R1&R 1)	Senior (R3)
	dentist-led regulation	3.3.1 Share knowledge and skills effectively with other team members and colleagues in the interests of patients.		✓
4	COMMITMENT TO SELF Demonstrate a commitment to dental health and well-being to foster optimal patient care.	4.1 Display self-awareness and manage influences on personal well-being and professional performance.	✓	✓
		4.2 Manage personal and professional demands for a sustainable practice throughout life.	✓	✓
		4.4 Promote a culture that recognizes, supports, and responds effectively to colleagues in need.	✓	✓

Integration of Disciplines

To simplify the distribution of the learning objectives included in the different restorative disciplines, the committee reorganized them into integrated modules that will ensure that the resident covers all the learning objectives of the restorative specialties. A well-planned curriculum will ultimately result in a good learning experience for the residents, where the relationship between modules and learning activities makes sense and the modules can build upon one another along the learning continuum. These modules are classified according to the subject theme as:

- Module 1: Basic science
- Module 2: Case Assessment and Treatment Planning
- Module 3: Applied Dental Biomaterial
- Module 4: Cariology
- Module 5: Operative Dentistry
- Module 6: Esthetics
- Module 7: Digital Restorative Dentistry

- Module 8: Fixed Prosthodontics
- Module 9: Occlusion
- Module 10: Dental Implants
- Module 11: Restorative-Periodontics Interrelationship
- Module 12: Scientific Research



Milestones and continuum of learning

Milestones are a new feature of CanMEDS 2015 (part of the CBD project) and reflect the abilities expected of a health professional at a certain stage of expertise. These milestones represent a continuum of learning and training. This continuum focuses on residency and continuing professional development after graduation. The CBD continuum approach breaks down specialist education into a series of integrated stages (see diagram), whereby residents in the program develop competencies at different stages during their residency and throughout practice. These stages are:

Transition to discipline stage: This is a new preparatory stage emphasizing the clinical knowledge and skills of the resident before entering the clinic.

Foundation of discipline: This stage covers scientific research and basic core science before moving on to more advanced discipline-specific competencies.

Core of discipline: This is the main stage, in which the resident covers the core competencies that make up the majority of the discipline. This starts with the basic specialty and progresses to become more advanced and complex during the transition from junior to senior residency.

Continuing professional development: After graduation, dentists progress in competence to attain expertise during continuing professional development (learning in practice).

Clinically, residents in the training program will be exposed to different cases from different training centers. Therefore, their responsibility in the clinic will increase and progress across the duration of the training period, starting with clinical examination and making the correct diagnosis through to devising a treatment plan and appropriate management. Junior residents have the responsibility of examination, collecting full patient records and data, making the right diagnosis, and writing a treatment plan. Moreover, junior residents perform dental procedures in the clinic and provide high-quality treatment for their patients. The earlier procedures are performed under the supervision of an assigned specialist and consultant. Senior residents have greater responsibility for the management of advanced cases, in addition to teaching junior residents under minimum supervision by a specialist and consultant. The following table shows the expected continuum of learning that should be achieved in each level of progression:

Procedures	Junior level	Senior level	Consultant
<p>Medical expert: Comprehensive dental treatment includes:</p> <ul style="list-style-type: none"> • Clinical examination • Diagnosis • Treatment plan • Restorative procedures • Recall and follow-up. 	<p>Residents show limited knowledge, skills, and broad competencies.</p> <p>Residents work in a dental clinic with close supervision.</p> <p>Their attitude is under development.</p>	<p>Residents show knowledge and experience as specialists in restorative dentistry.</p> <p>Residents work in dental clinics without close supervision.</p> <p>Residents perform dental procedures as expected of a specialist in restorative dentistry.</p> <p>Their attitude develops as expected of a specialist in restorative dentistry.</p>	<p>Dentists in this stage maintain achieved competences and continue their professional development to attain and update more skills within their scope of practice.</p>
<p>Communicator</p>	<p>Residents can actively listen and respond to a patient inquiry.</p> <p>Residents use appropriate non-verbal body language communication to demonstrate attentiveness, interest, and responsiveness to patients and their families.</p>	<p>Residents use appropriate non-verbal behaviors to enhance communication with patients.</p> <p>Residents provide information on diagnosis and prognosis in a clear, compassionate, respectful, and objective manner.</p> <p>Residents facilitate discussions with patients and their</p>	<p>Dentists demonstrate advanced non-verbal communication skills in difficult situations.</p> <p>Dentists teach others how to use non-verbal communication to enhance dentist-patient rapport.</p> <p>Dentists are role models for their colleagues.</p>



Procedures	Junior level	Senior level	Consultant
		families in a respectful and safe environment.	
Collaborator	<p>Residents respect the established rules of their team.</p> <p>Residents receive and appropriately respond to input from other health care professionals.</p> <p>Residents differentiate between task and relationship issues among health care professionals.</p>	<p>Residents work effectively with dentists and other colleagues in the health care professions.</p> <p>Residents establish and maintain positive and healthy relationships with dentists and other colleagues in the health care professions.</p>	<p>Dentists contribute to policy discussions related to collaborative care.</p> <p>Dentists teach, assess, and utilize a model of collaborative care.</p> <p>Dentists use e-Health tools to enhance collaboration in health care.</p>
Leader	<p>Residents describe the process for reporting adverse events and medical errors.</p> <p>Residents determine cost discrepancies between best practice and their current practice.</p>	<p>Residents analyze adverse events and medical errors to enhance systems of care.</p> <p>Residents develop plans to change areas of wasteful practice within their discipline.</p> <p>Residents evaluate a problem, set priorities, execute the plan, and analyze the results.</p>	<p>Dentists contribute to the improvement of health care delivery in teams, organizations, and systems</p> <p>Dentists design processes that balance standardization and variability to reduce medical errors and ensure patient safety in the delivery of health care.</p> <p>Dentists provide mentorship and guidance to help others develop leadership and motivational skills.</p>

Procedures	Junior level	Senior level	Consultant
Health advocate	<p>Residents respond to an individual patient's health needs by advocating for the patient within and beyond the dental clinical environment.</p> <p>Residents analyze a given patient's needs for health services or resources related to the scope of their discipline.</p> <p>Residents select appropriate patient education resources related to their discipline.</p>	<p>Residents apply the principles of behavior modification during conversations with patients to improve oral health.</p> <p>Residents participate in a process to improve oral health in the community.</p>	<p>Dentists collaborate with organizations and surveillance programs to identify needs at the population level.</p> <p>Dentists plan or lead the implementation of a program to improve the oral health of the community.</p>
Professional	<p>Residents manage tensions between societal and dentists' expectations.</p> <p>Residents demonstrate an ability to regulate tension, emotions, thoughts, and behaviors while maintaining their capacity to perform professional tasks.</p>	<p>Residents demonstrate a commitment to patients by applying best practices and adhering to high ethical standards.</p> <p>Residents demonstrate a commitment to patients by applying best practices and adhering to high ethical standards.</p>	<p>Dentists exhibit appropriate professional behaviors.</p> <p>Dentists exhibit honesty, integrity, dedication, compassion, respect, and altruism.</p> <p>Dentists serve as role models and teach professionalism to learners and colleagues.</p>



TEACHING AND ACADEMIC ACTIVITIES

General Principles

Teaching and learning are based on strategies that encourage self-directed learning, development of a high level of intellectual ability, and integration of knowledge and skills. Multiple and effective instructional methods will be offered to help residents achieve their learning objectives in most areas.

Every week, at least 6 hours of formal teaching time should be reserved. Formal teaching time is planned in advance with an assigned tutor, time slots, and a venue. Formal teaching time excludes clinical training.

The core educational program includes the following formal teaching and learning activities:

1. Universal topics
2. Core specialty topics
3. Basic science course
4. Preclinical course (basic specialty topics and practical training)
5. Advanced specialty topics
6. Trainee-selected topics
7. Research and evidence-based topics
8. Educational methods and professional development topics.

The core educational program will be supplemented by other practice-based and work-based learning such as:

1. Clinic-based learning
2. Comprehensive case presentations
3. Treatment plan sessions/case-based learning

4. Literature review or Journal Club
5. Self-direct learning
6. Community services
7. Elective modules (special interest module)
8. Supplementary courses and workshops.

Every 4 weeks, at least one hour should be assigned to activities such as meeting with mentors (refer to mentor guidelines), review of portfolio, or mini-clinical evaluation exercises.

Core Educational Program

Universal Topics

Introduction and rationale

Universal topics are high-value, interdisciplinary topics of the utmost importance to the trainee. The reason for delivering the topics centrally is to ensure that each trainee receives high-quality teaching and develops essential core knowledge. These topics are common to all dental specialties.

Description

Topics included here must meet one or more of the following criteria:

- **Impactful:** topics that are common or life-threatening
- **Interdisciplinary:** topics that are difficult to teach in a single discipline
- **Orphan:** topics that are poorly represented in the undergraduate curriculum
- **Practical:** topics that trainees will encounter in clinical practice.

These topics will be developed and delivered centrally by the commission through an e-learning platform. A set of preliminary learning outcomes for each topic will be developed. Content experts, in collaboration with the central team, may modify the learning outcomes. These topics will be didactic in nature and will focus on practical aspects of care. These topics have more content than a workshop and other planned face-to-face interactive sessions. The suggested duration of each topic is one and a half hour.



Teaching methods

E- learning

Assessment

- Online formative assessment at the end of each learning unit.
- Combined summative assessment in the form of context-rich MCQ after completion of all topics.
- Alternatively, these topics can be assessed in a summative manner along with specialty examination

Module	Universal topic
R1	Hospital acquired infections Occupation hazards for health care workers
R2	Safe drug prescribing Recognition and management of diabetic emergencies
R3	Antibiotics Stewardship Abbreviations Prescribing drugs in the elderly Side effects of Chemotherapy and Radiation Therapy

Core Specialty Topics

Preclinical Course

Introduction and rationale

This course is one of the basic preparatory components of the SBRD curriculum. The main focus is on developing the residents' skills and knowledge of the basic principles they need to be proficient in caring for patients in the field of restorative dentistry. The basic knowledge and psychomotor skills gained in this course will also provide residents with increased ability and confidence to acquire additional advanced knowledge and technical skills in the different disciplines of restorative dentistry. The course also includes courses in basic science, advanced didactic courses in basic biomedical and biodental science, and are designed to cover more in-depth topics that were taught during undergraduate education. This will

provide residents with the level of knowledge of the basic sciences required to ensure that they are competent in their dental specialty.

General objectives

This course is expected:

1. To provide residents with advanced knowledge regarding head and neck anatomy including the structure and blood supply of the head and neck, tongue, oropharynx, teeth, masticatory muscles, and the TMJ.
2. To provide residents with advanced knowledge of oral biology, especially the microstructure and biology of the oral tissues.
3. To provide residents with education in oral radiology including radiation physics, radiation biology, hazards and protection, advanced imaging techniques, and diagnostic oral radiology.
4. To enhance residents knowledge of pharmacological agents, especially those commonly used in treating oral and systemic diseases. Residents must gain experience in prescribing medication for patients under their care and must be fully knowledgeable of the indications, contraindications, and potential adverse reactions of all medications used.
5. To revise knowledge related to oral pathology including the differential diagnoses of common oral lesions as well as early screening and diagnoses of oral cancers.
6. To provide residents with the knowledge related to biomaterials including materials science and basic physical, mechanical, and chemical properties of materials utilized in various applications in the oral cavity.
7. Revise the basic principles and current concepts in restorative dentistry.
8. To allow residents to develop a basic knowledge about the principles, technical steps, indications, and contraindications of the different procedures and the materials involved in the operative, fixed prosthodontics, and esthetics disciplines.
9. To allow residents to gain knowledge about dental morphology and occlusion.
10. Explain and apply the appropriate sequence of clinical investigations.



11. To teach residents how to use the necessary investigations required to make a clinical diagnosis and develop a suitable treatment strategy.
12. Explain the basic principles of dynamic diagnosis and management of caries.
13. To teach residents to recognize the basic periodontal concepts, diseases, and procedures determining the success of restorative dental practice.
14. To allow residents to identify the main concepts of esthetics and color in dentistry.
15. To allow residents to identify all the types of dental materials used in laboratory procedures.
16. To teach residents to explain the main laboratory procedures, be able to communicate effectively with laboratory technicians, and give correct instructions to the laboratory during future clinical work.
17. To allow residents to understand the terminology, types, procedures, and steps involved in making dental implants.
18. Maximize residents' psychomotor skills in the different operative and fixed prosthodontics procedures and have residents be ready to implement them clinically.
19. To teach residents to demonstrate appropriate time management during laboratory work.
20. To teach residents to demonstrate appropriate patient record-keeping before commencing clinical procedures.
21. To train residents to recognize personal mistakes and how to avoid and correct them.
22. To teach residents to communicate professionally with supervisors, colleagues, and other laboratory staff.
23. To teach residents to be able to correlate the physical, chemical, and biological properties of restorative materials with teeth and surrounding soft tissues with regards to different procedures.

Course description

This course is delivered to residents over 7 weeks at the start of the residency year. It is composed of two integrated sections. The first section introduces residents to basic knowledge in the different restorative disciplines by

covering the basic specialty topics. The content of this section will be delivered in the form of lectures, resident presentations, and group discussions. The second section focuses on developing the psychomotor skills required by residents during their clinical work, in addition to practicing some diagnostic and laboratory procedures. It is designed to provide hands-on training in the clinical and laboratory procedures essential for the SBRD program.

This will be in the form of assigned exercises representing the different operative and fixed prosthodontic procedures and materials. Reading assignments will be required of the residents before the session, and supplementary short lectures or discussions will precede the laboratory work.

Educational strategy and teaching methods

The preclinical course is based on teaching strategies that encourage interactive, student-centered approaches, teamwork, and self-directed learning. The hands-on training sessions will apply the principles of psychomotor teaching to ensure development of the three phases of psychomotor skill, i.e., cognitive, developmental, and automated. Various instructional techniques will be used including:

- Interactive lectures.
- Resident activities (presentations, assignments)
- Group discussions.
- Demonstrations using different aids.
- Close laboratory supervision.
- Training during free time.

Assessment

At the end of this course, all residents will have the Preclinical Course Test (PCCT) which will cover all lectures with essays, short answers, matching, and MCQs. The grade of this exam will be 50% of the total grade of this course. In order to pass the course, the resident must have at least 60 points (out of 100) in the end course exam grade.



For both the assignment and the end course exam, the grade will be counted as a part of R1 academic activities (WSA) by 10% of the equivalent of 2 quizzes. In case the resident fails (with a grade less than 60 points out of 100) or does not do the final exam, there is no possibility of doing it again. A remediation plan in the form of a structured oral exam will be planned for the resident who fails to pass the course within a month after the PCCT. Residents will not be allowed to start clinical sessions unless the PCCT is passed.

Weekly Scientific Activities

Introduction and rationale

The weekly scientific activity course (delivering the advanced specialty topics) is a part of the didactic courses required by the SBRD program. The main focus is on acquiring the advanced knowledge to be integrated with the clinical skills and attitudes acquired in the clinical training part of this program and to develop the competencies needed for a successful professional practice in the field of restorative dentistry.

Educational objectives

- To cover the recommended reading list on advanced topics for each restorative discipline (operative dentistry, fixed prosthodontics, and dental implants).
- To help residents acquire experience in researching and critical analysis of scientific papers.
- To improve the residents' presentation and discussion skills.
- To prepare for examination.
- To develop independence, self-confidence, and creativity.

Course description

The topics in this course are delivered during the residency program for one day each week. They provide residents with advanced knowledge about the different restorative disciplines that challenge the residents depending on their level of training. It is composed of three parts (weekly scientific activity wheels). The first part includes the topics that should be covered during R1 residency, the second part includes the topics that should be covered during

R2 residency, and the third part includes the topics that should be covered during R3 residency. The weekly scientific activity day consists of a morning and an afternoon session. In each session, a different topic will be delivered, and various educational activities will be undertaken according to the tutor's choice. Discussion of the pros and cons, the residents' activity or interactivity in lectures, and a literature review will be undertaken during each session.

Teaching strategies and methods

The weekly scientific activity course is based on educational strategies that encourage interactive, student-centered approaches in an attempt to develop skills in teamwork, self-directed learning, lifelong learning, and a high level of intellect. Each tutor will be responsible for selecting and organizing the educational method that best fits the reviewed topic. These methods can be:

- Student presentations or seminars
- Problem-based learning
- Interactive lectures
- Case-based learning
- Review of the literature (seminars or discussion)
- Guest speakers
- Discussion of pros and cons
- Student assignments
- Cooperative learning ("buzz groups")
- Workshops

Assessment

- Evaluation of resident's activities (presentations, literature review, contribution to discussion)
- Academic Activities (AA) including quizzes.
- Attendance (minimum 85%)



Research

Introduction and rationale

Research is a systematic process of collecting and analyzing information to increase understanding of the phenomenon under study (Leedy and Ormond, 2010). In the SBRD program, this process is helpful in generating, integrating, and applying knowledge gleaned from research in clinical practice. Conducting scientific research will improve residents' skills, including their critical thinking, problem-solving, and decision-making skills. Furthermore, it creates an innovation-oriented culture and encourages professional communication skills in residents. Moreover, residents will have the opportunity to gain more knowledge and experience through a direct relationship with expert research supervisors.

Course description

This course will provide SBRD residents with the basic skills needed to approach a scientific research project and complete it successfully. Moreover, it will provide them with an overview of the application of research methodology in dentistry. Therefore, this course will cover topics such as:

- The research process
- Study design
- Basics of biostatistics
- Manuscript writing
- Research presentation.

The content of this course will be delivered at the beginning of R1 after the PCC, utilizing a student-centered concept. Residents will participate in presenting scientific information by asking, discussing, critiquing, and justifying scientific issues based on scientific evidence. One specialist member will attend as a guest to contribute, guide the discussion, and add valuable comments. A hands-on workshop will be held during this course to facilitate understanding of the research process.

General objectives

1. At the end of the SBRD program, residents will be able to:
2. Identify the basics of scientific research.
3. Explain the meaning of evidence-based dentistry.
4. Use different information sources (PubMed, journals, textbooks, websites, library...?).
5. Recognize literature that has relevance to the clinical practice.
6. Recognize the ethical principles of scientific research.
7. Explain the study design.
8. Conduct scientific research (e.g. Proposal defense, research presentations, and poster presentations).
9. Recognize the basics of biostatistics.
10. Present scientific research, topics, and articles with good verbal communication.
11. Write scientific research manuscripts, which will improve scientific writing skills.
12. Explain the process of publication.
13. Critically appraise published articles.

Attendance

The total course duration is 6 days (12 sessions). Module attendance is mandatory with 85% of the total sessions (10 sessions) and this will account for 5% of the total attendance of weekly scientific activities (WSA) of R1.

Assignment

Residents in groups will submit an assignment after the majority of the lectures and peer review assessments will be done, and residents will receive feedback. The grade of this assignment is 50% of the total grade of this course. In order to pass the course, the resident must have at least 60 points (out of 100) in the assignment grade.



Scholarly Activities

To encourage residents to perform a scholarly task, a bonus grade will be given from the weekly scientific activity's quizzes of R3 as follows: 10% bonus for poster presentation at a local or national conference, including Resident's Day. Also, an additional 5% bonus is given if the poster is presented at international conferences. In case of publication in Scopus or Web of Science-indexed journals, the bonus will be 25% as total for this academic activity.

Literature Review Sessions

Classical and current dental literature on different topics in restorative dentistry will be prepared and discussed in the form of a seminar by residents in the presence of training staff. Residents will be evaluated by the tutor at the end of the session.

Self-Directed Learning

Self-directed learning (SDL) is an educational experience that is planned and organized by the resident with or without the help of others. It is used to augment learning in a particular area or to meet a learning objective.

Educational Methods and Professional Development Topics

Introduction and rationale

The SBRD curriculum has adopted a clear mission and vision that supports excellence in medical education and employs new educational strategies and instructional methods. This necessitates the appropriate development of both SBRD program faculty and residents for better understanding and applying of the adopted concepts, principles, and required skills of learning, teaching, managing, communicating, and professional development.

Course description

This course will introduce SBRD residents to the new approaches and concepts in dental education and provide them with the skills in teaching, learning, communication, leadership, teamwork, and self-directed learning needed during their training years and for their future professional education

and development. The content of this course will be delivered in the form of lectures and workshops during the first and second years of residency.

Teaching strategies and methods

The medical educational methods and professional development courses are based on educational strategies that will emphasize interactive student-centered approaches to encourage self-directed learning, lifelong learning, problem-solving, and a high level of intellect. Many teaching methods will be used including:

- Interactive lectures
- Workshops
- Guest speakers
- Resident activities and assignments

Evaluation

- The evaluation will be based on:
- An end of cycle evaluation form
- Attendance and contribution

Practice- and Work-Based Learning

Clinic-Based Learning – General Policies

In the context of providing comprehensive restorative dental care, the program includes advanced clinical training in operative dentistry, fixed prosthodontics, and implantology, with an emphasis on diagnostic science and soft tissue management. There will be a sufficient number and variety of cases in all three disciplines to ensure an appropriate training ground for each resident. Residents will be assigned patients who present increasingly difficult problems and will be given increasingly greater clinical responsibility as they progress in their advanced training. The resident is expected to upgrade and increase his/her knowledge, skills, and abilities in the management of a wide range of complex dental problems and acquire a specialist's perspective. Assessment methods used include CBD, multi-



source feedback or 360, DOPS, a mini clinical evaluation exercise, and a clinical supervisor's report. Additional policies include:

1. All assigned comprehensive clinical cases should fulfill the SBRD Restorative Dentistry Index of Treatment Need – RDITN.
2. All assigned comprehensive clinical cases should involve skills from the three treatment modalities: Operative Dentistry and Fixed Prosthodontics.
3. Full documentation of each case pre-operatively, including accurate medical and dental records, during the course of treatment, post-operatively, with clinical slides, mounted diagnostic casts, and full-mouth radiographs or Panoramic Radiographs. (follow SBRD treatment plan protocol in regard to documentation)
4. A definitive treatment plan must be approved by the consultant-in-charge and a copy must be documented inside the file of the patient.
5. Each patient must sign a consent form prior to initiating treatment, with approval of the treatment plan (Appendix 3).
6. Residents should only consult assigned SBRD instructors or assigned consultants in other specialties (according to the consultation schedule) in the specified centers.
7. It is mandatory to abide by the training center clinical schedule (at least six sessions per resident).
8. Residents are required to treat at least four patients daily (two patients per session).
9. The resident must present his/her clinical cases during the monthly case presentations and treatment planning session in the training center in the presence of the consultants and other residents (the schedule will be provided by the training center)
10. Residents must have his/her personal intra-oral camera to take the appropriate clinical image documentation needed for the program.
11. The resident must complete the minimum number of Comprehensive and Esthetic Cases to be eligible for promotion and completion of the program.
12. Residents should complete the required number of single requirements per year to be eligible for promotion and completion of program.

13. To be eligible for graduation, all residents are required to complete the minimal number of Comprehensive and Esthetic Cases with the following RDITN complexity.
14. Cases treated in SBRD clinics should follow the allotted protocol, phases I–VI.
15. Trainees should fill out SBRD forms for each comprehensive case.
16. Only assigned SBRD instructors with a specified code are permitted to participate in clinical training, evaluation, and signing the Saudi Board in Restorative Dentistry Digital Clinical Evaluation System following all dental procedures.

Clinic-Based Learning – Comprehensive Esthetic Cases (CECs)

Residents are expected to complete a set number of comprehensive esthetic cases (CECs) throughout the three training years of the program in order to practice specialty-specific competencies and provide high standards of comprehensive care augmented by evidence-based diagnosis and management. Breakdown of numbers and complexity of the cases are included below.

The minimum criteria for Comprehensive Esthetic Cases (CECs) include the presence of three primary domains; (the 7-3-1 criteria for short):

1. Minimally-invasive management of carious teeth according to the Caries Management by Risk Assessment (CAMBRA) model. This should include a minimum of 7 carious teeth with lesions of scores 1 through 6 according to the International Caries Detection and Assessment System (ICDAS).
2. Conservative management utilizing indirect restorations. This should include a minimum of 3 abutment teeth restored with inlays, onlays, or crowns.
3. Esthetic procedures including a minimum of one of the following Esthetic Techniques (ETs):
 - a. Esthetic composite layering of an anterior tooth.
 - b. Direct composite veneer of an anterior tooth.
 - c. Diastema closure using direct composite technique (a minimum of 2 adjoining teeth).

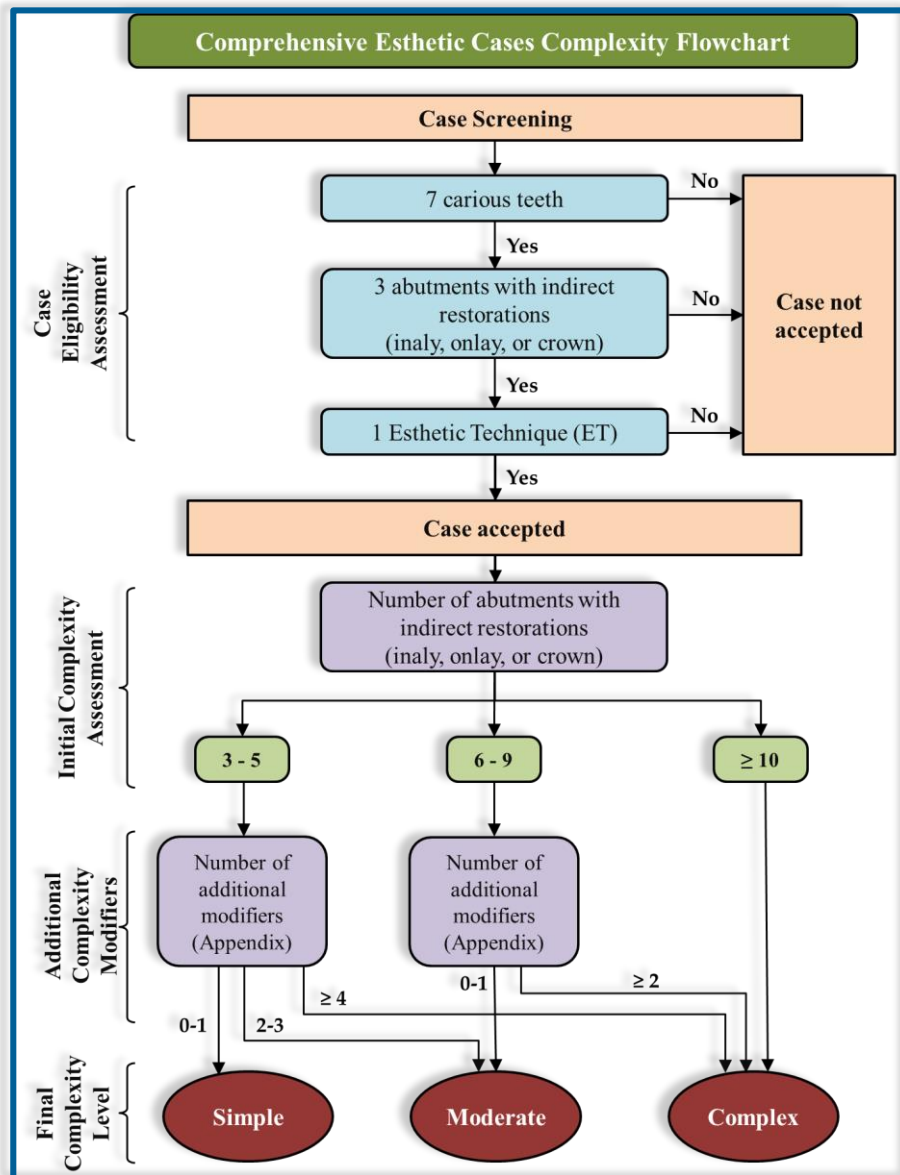


- d. Direct cuspal buildup on a posterior tooth (3 surfaces or more excluding mesio-occluso-distal, MOD, restorations).
- e. Porcelain laminate veneers (a minimum of 4 anterior teeth).
- f. Anterior implant.

The total number of required CECs for the program is 15 completed cases (complexity: 7 simple, 5 moderate, and 3 complex cases). Among these 15 cases, the resident must submit at least one case containing each of the above-mentioned six ETs. In addition, each resident must submit a minimum of 10 ETs with complete records of all the steps (including pre- and post-operative photographs, wax-up/mock-up, cavity preparation, and restorative steps). The minimum number of required ETs is as follows:

- » 2 cases: Esthetic composite layering of an anterior tooth.
- » 2 cases: Direct composite veneer of an anterior tooth.
- » 1 case: Diastema closure using direct composite technique (a minimum of 2 adjoining teeth).
- » 2 cases: Direct cuspal buildup on a posterior tooth (3 surfaces or more excluding mesio-occluso-distal, MOD, restorations).
- » 2 cases: Porcelain laminate veneers (a minimum of 4 anterior teeth).
- » 1 case: Anterior implant.

Comprehensive Esthetic Cases (CECs)			
Level	A1	A2	A3
Simple	7	5	3
Moderate	5	3	2
Complex	3	2	1
TOTAL	15	10	6



Esthetic Techniques (ETs):

- Esthetic composite layering of an anterior tooth.
- Direct composite veneer of an anterior tooth.
- Diastema closure using direct composite technique (a minimum of 2 adjoining teeth).
- Direct cuspal buildup on a posterior tooth (3 surfaces or more excluding mesio-occluso-distal, MOD, restorations).
- Porcelain laminate veneers (a minimum of 4 anterior teeth).
- Anterior implant.

Appendix (additional complexity modifiers):

- Interceptive orthodontics.
- Esthetic soft tissue management (e.g. osseous crown lengthening or lip repositioning).
- Two dental implants.
- Increasing the vertical dimension of occlusion (VDO).
- An increase of 5 indirect restorations (inlay, onlay, crown, or veneer).
- Case with handling difficulty (e.g. severe limitation of mouth opening, debilitated patient, or medically-compromised patient).

Clinic-Based Learning – Cases Complexity Determination

Comprehensive esthetic cases can be categorized into three levels: simple, moderate, and complex. After the case accepted based on the eligibility criteria, determining the complexity level of a case depends on many factors including the number of abutment teeth requiring indirect restorations and the presence of conditions which complicate the management of the case. The latter conditions are called complexity modifiers which necessitate either a multidisciplinary approach, dealing with a difficult case, or the utilization of additional procedures. In order to determine the case complexity, the following steps can be followed:

1. Ensure the (7-3-1) case eligibility criteria are met.
2. Perform initial complexity assessment. This is based on the total number of abutment teeth requiring indirect restorations (inlay, onlay, or crown).
3. Assess the case for additional complexity modifiers. The final complexity level will be affected by the presence of the following case complexity modifiers (multiple scenarios form the same category will be counted as one):
 - a. Interceptive orthodontics.
 - b. Esthetic soft tissue management (e.g. osseous crown lengthening or lip repositioning).
 - c. Two dental implants.
 - d. Increasing the vertical dimension of occlusion (VDO).
 - e. An increase of 5 indirect restorations (inlay, onlay, crown, or veneer).
 - f. The presence of handling difficulty (e.g. severe limitation of mouth opening, debilitated patient, or medically-compromised patient).

4. Final complexity level of the case is determined. Please refer to the follow chart and the table below.

Comprehensive Esthetic Cases (CECs) Complexity (after 7-3-1 case eligibility criteria are met)	
Simple	3 – 5 abutment teeth requiring indirect restoration plus 0 – 1 additional complexity modifiers
Moderate	3 – 5 abutment teeth requiring indirect restoration plus 2 – 3 additional complexity modifiers
	6 – 9 abutment teeth requiring indirect restoration plus 0 – 1 additional complexity modifiers
Complex	3 – 5 abutment teeth requiring indirect restoration plus ≥ 4 additional complexity modifiers
	6 – 9 abutment teeth requiring indirect restoration plus ≥ 2 additional complexity modifiers
	≥ 10 abutment teeth requiring indirect restoration

Clinic-Based Learning – Single Requirements

Additional procedures involving the specialties of the program must be done according to the annual accomplishment guide (refer to Appendix II).

Case-Based Discussion

R2 and R3 residents should present a comprehensive case managed in their clinic once a year (CBD). Attendance and contributions from the other residents to the discussion are mandatory. Each resident will be assessed by at least three consultants who will complete a special assessment form. R1 residents will present a clinical comprehensive case focusing on case documentation, diagnosis, and treatment planning.

Treatment Planning Sessions

All treatment plans for comprehensive and special cases should be presented and discussed locally in the training center and in the presence of the clinical supervisors and other residents. Case discussion sessions will be held weekly for the discussion of diagnostic problems, treatment planning, case presentation, review, and follow-up. As an alternative teaching method, case-based teaching sessions can be conducted.



Community Service

Residents have the opportunity to learn by community service in groups. The most important aspect of this service is helping patients to improve their oral health. The aim of these activities is to assist residents in identifying and meeting dental health and social needs in the community. This service can be done in several ways: volunteering at hospitals or nursing homes, providing dental health education programs in schools, or participating in programs run by dental or medical societies.

Elective (special interest) Courses

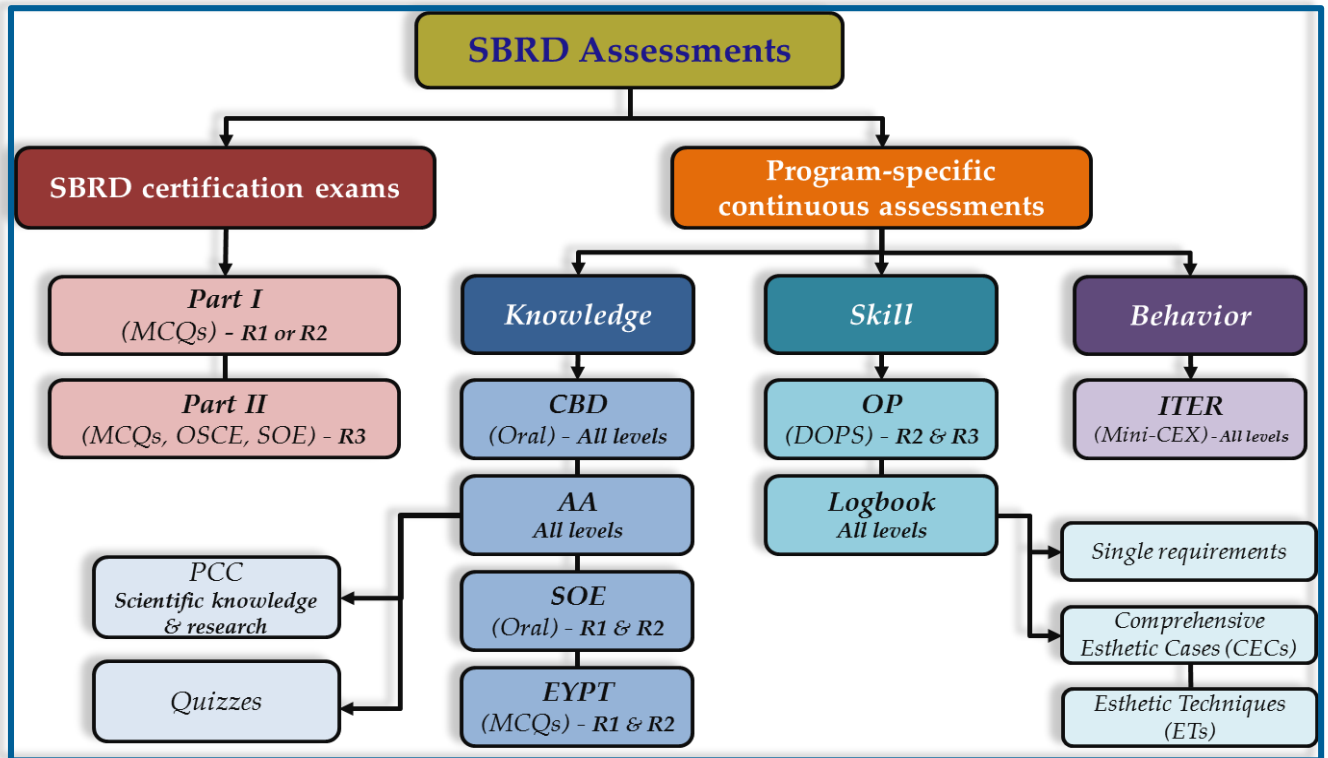
Towards the end of the training in the program and once the majority of learning objectives are achieved, senior SBRD residents may choose to undertake special interest modules, with the approval of the Sector's Shared Training Committee and SBRD Scientific Committee. These elective modules can include an attachment to an overseas institution recognized within the specialty, as providing superior additional experience within the sphere of interest of the trainee and a national attachment to an institution recognized within the specialty, as providing superior additional experience within the sphere of interest of the trainee.

Supplementary Courses and Workshops

Frequent seminars, workshops, and demonstrations of dental procedures will be conducted throughout the program. This includes hands-on training in new dental materials, new dental technology, and modern clinical procedures, and improving clinical skills.

ASSESSMENTS

The SBRD program includes two distinct assessment components: Program-specific continuous assessment supervised by the scientific counsel and SBRD certification examinations overseen by SCFHS.



Program-Specific Continuous Assessments

Program-specific continuous assessments include a group of assessments that are directed towards measuring residents' competencies in three distinct domains: knowledge, skill, and behavior.



Program-specific continuous assessments				
Assessment	Level			Format
	R1	R2	R3	
I. Knowledge				
1. End of Year Progress Test (EYPT)	✓	✓	-	MCQs
2. Structured Oral Examination (SOE)	✓	✓	-	Oral
3. Case-Based Discussion (CBD)	✓	✓	✓	Oral
4. Academic Activity (AA)	✓ (9)	✓ (6)	✓ (5)	MCQs
II. Skill				
1. Logbook (LB)	✓	✓	✓	-
2. Observable Procedures (OP)	-	✓	✓	DOPS
III. Behavior				
1. In-training Evaluation Reports (ITER)	✓	✓	✓	Mini-CEX

Knowledge Domain

End of Year Progress Test

The End of Year Progress Test (EYPT) is a written examination at the end of each training year (for R1 and R2 only) to ensure that the resident has a competent level of knowledge for the various topics and concepts provided throughout the training year via the different teaching and training activities. The blueprint of EYPT is determined based on topics provided during WSA but can contain additional topics offered via other learning modalities.

Structured Oral Examination

Structured oral examination (SOE) is used mainly to test the cognitive domain and is conducted with the aim of evaluating the qualities like depth of knowledge, ability to discuss and defend one's decisions, attitudes, alertness, ability to perform under stress, and professional competence. Residency level involved: R1 and R2 only.

Method:

- Based on the various topics as per the curriculum prescribed, questions should be framed under different topics following the required domains.
- Based on residency level, the questions should be designed and developed with graded levels of difficulty and different topics of the examination. Topics need to be categorized as major and minor based on importance.
- The questions should be subjected to peer review and finalized with the approval of the head of the Structured Oral Exam Committee (SOEC).
- Cards are designed with approved questions written on them.
- At the exam, 10 sets of cards should be prepared and laid out on the table. Each set has two subsets a) direct questions b) applied questions. In case the student fails to answer any question totally, he/she will be allowed one to two attempts to select other cards. Each resident has to successfully answer 2 out of 3 cards chosen. Each card contains at least 2 questions (for R1, mainly knowledge, and for R2, knowledge and cognition questions).
- Examiners will use the SOE assessment form to evaluate residents.
- The exam should be held at the end of all scientific activities.
- Residents must pass the exam to be promoted.
- Three examiners will be involved in the exam and they will be selected by the regional training committee. Program directors should not evaluate their residents.
- Residents should receive feedback regarding their performance.
- Residents will be considered clear fail when at least two examiners grade the residents below 60%

Case-Based Discussion

The resident discusses his or her cases with evaluators in a standardized and structured oral examination. The purpose is to evaluate the resident's clinical decision-making and diagnosis, reasoning, treatment plan phases, and how



they support their management with evidence. The evaluators question the resident about the care provided in predefined areas– problem definition (i.e., diagnosis), clinical thinking (interpretation of findings), management and maintenance care (treatment and post-op care plans). Evaluation of the case-based discussion (CBD) abides by the following considerations:

- CBD assessment forms should be used for evaluation of comprehensive cases only.
- Depending on the level, the assessment for CBD would be different (see CBD form).
- Residents must pass the exam (>60%) to be promoted.
- Three examiners will be involved in the CBD session and they will be selected by the regional training committee. Program directors should not evaluate their residents.
- Residents should receive feedback regarding their performance.
- Residents will be considered clear fail when at least two examiners grade the residents below 60%.

Academic Activities

The term Academic Activities (AA) can be used interchangeably with quizzes provided throughout the training year. The number of AA in each training year is as follows:

- R1: 9 AA (7 quizzes and 2 quizzes counted for PCCT including the research module assessment).
- R2: 6 quizzes
- R3: 5 quizzes (scholarly research activity bonus is populated in R3's AA).

Skills Domain

Logbook

Recording of all cases and single requirements that the resident accomplishes throughout the training period of the program must be done in the logbook (LB) based on the Annual Logbook accomplishment Guide (see appendix). This portfolio must be submitted at the end of each training year

and will be reviewed and evaluated by the cases reviewing committee. The logbook is allocated 3,600 points throughout the course of the program with a breakdown of 900 points for R1; 1,250 points for R2; and 1,450 points for R3. The LB contains three sections: 1. Single requirements and 2. Comprehensive esthetic cases (CECs). These sections account for 28, and 72% of the LB grade, respectively. This breakdown is applicable both at the level of each training year as well as the level of the whole training period of the program.

1. Single requirements:

Single requirements account for 28% of the total LB grade (300 points for R1 and 350 points for R2 and R3 or 1,000 points throughout the period of the program). These grades will be distributed over 5 items from the annual accomplishment guide:

- Operative (400 total points): minimally-invasive procedures as well as direct restorations, inlays and onlays (1 point per procedure).
- Prosthodontics (300 total points): post/core, crown, non-surgical management of temporomandibular dysfunction, and implants procedures (2 points per procedure).
- Esthetics (100 total points): bleaching, diastema closures, and veneers (1 point per procedure).
- Diagnosis and treatment planning (150 total points): Diagnosis and treatment planning procedures from all disciplines (2 points per procedure).
- Recall (50 total points): recall procedures at 6 and 12 months post-treatment (5 points per procedure).

2. Comprehensive esthetic cases:

CECs account for 72% of the total LB grade (600 points for R1; 900 points for R2; and 1,100 points for R3 or 2,600 points throughout the period of the program). These points will be distributed over the 15 CECs following the annual accomplishment guide with simple cases accounting for 100 points each, moderate cases accounting for 200 points each, and complex cases accounting for 300 points each.



Logbook passing criteria

In order for the resident to achieve a passing score for LB for each year, three conditions must be fulfilled based on each training year (see table below). Failure of achieving any of these conditions will be considered as an unacceptable skill performance and the resident must repeat the corresponding training year:

- For R1:
 - Cut-off score (60%) for the overall LB points must be reached (540 points out of 900).
 - Cut-off score (60%) for CECs points must be reached (360 points out of 600).
 - Cut-off score (60%) for each of the 5 subcomponents (except for recall) in single requirements must be reached:
 - Operative: 78 points out of 130.
 - Prosthodontics: 60 points out of 100.
 - Esthetics: 18 points out of 30.
 - Diagnosis and treatment planning: 24 points out of 40.
 - Recall: 0 points.
- For R2:
 - Cut-off score (80%) for the cumulative overall LB points must be reached (1,720 points out of 2,150 points).
 - Cut-off score (80%) for cumulative CECs points must be reached (1,200 points out of 1,500).
 - Cut-off score (80%) for cumulative points of each of the 5 subcomponents in single requirements must be reached:
 - Operative: 216 points out of 270.
 - Prosthodontics: 160 points out of 200.
 - Esthetics: 56 points out of 70.
 - Diagnosis and treatment planning: 72 points out of 90.
 - Recall: 16 points out of 20.
- For R3:
 - Overall LB points must be reached (3,600 points out of 3,600).

- All CECs must be completed (2,600 points out of 2,600 accounting for 15 cumulative cases).
- Complete fulfillment (100%) of each of the 5 subcomponents in single requirements must be reached:
 - Operative: 400 points.
 - Prosthodontics: 300 points.
 - Esthetics: 100 points.
 - Diagnosis and treatment planning: 150 points.
 - Recall: 50 points.

Logbook Passing Criteria by training year				
		R1	R2	R3
Cut-off for points		60%	80%	100%
Overall LB points		540 / 900 pt.	1,720 / 2,150 pt.	3,600 / 3,600 pt.
Comprehensive esthetic cases (CECs)		360 / 600 pt.	1,200 / 1,500 pt.	2,600 / 2,600 pt.
Single requirements	Operative (1 pt. / procedure)	78 / 130 pt.	216 / 270 pt.	400 / 400 pt.
	Prosthodontics (2 pt. / procedure)	60 / 100 pt.	160 / 200 pt.	300 / 300 pt.
	Esthetics (1 pt. / procedure)	18 / 30 pt.	56 / 70 pt.	100 / 100 pt.
	Diagnosis & treatment planning (2 pt. / procedure)	24 / 40 pt.	72 / 90 pt.	150 / 150 pt.
	Recall (5 pt. / procedure)	-	16 / 20 pt.	50 / 50 pt.

Logbook grading for promotion criteria

The LB grading in order to determine the passing/failure status of the resident according to the SCFHS criteria (clear pass, borderline pass, borderline fail, or clear fail) will be calculated after ensuring the passing criteria mentioned above (section Logbook passing criteria) are met. After that, the total LB points (points from single requirements and CECs) earned by the resident will be used to calculate a percentage which will be compared to the points allocated for the specific training year (900; 1,250; and 3,600

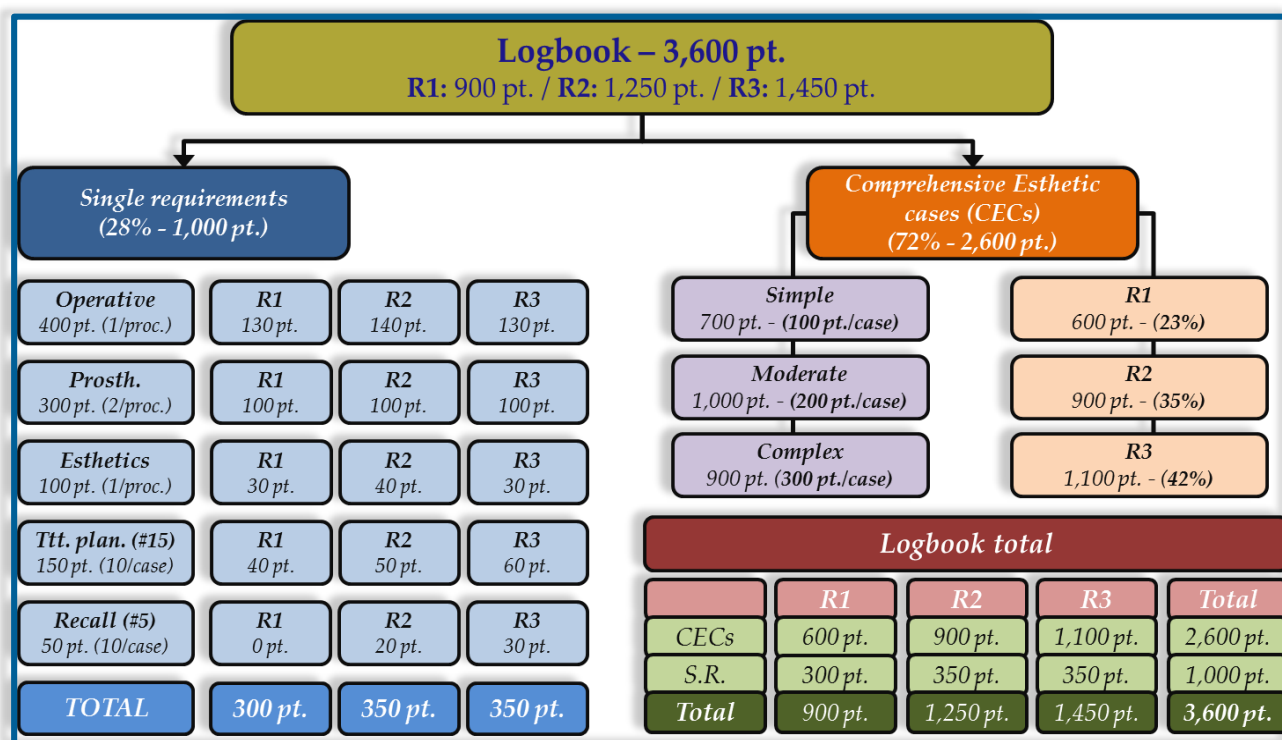


points for R1; R2; and R3 respectively. This resulting percentage figure will be compared to the cut-off scores verified by the SCFHS to determine the passing status for the LB assessment. For example, if an R1 resident fulfilled the passing criteria mentioned above by obtaining 400 points in CECs and 210 points in single requirements (90 in operative, 70 in prosthodontics, 20 in esthetics, and 30 in diagnosis and treatment planning) this means the resident obtained 610 overall points out of the 900 allocated to R1. Thus, the resident's percentage will be $(610 \times 100) / 900 = 67.78\%$ which falls in the "Borderline pass" category.

Logbook Single Requirements by Section				
Section	Procedures types & quantities	Total number of procedures in section	Point per procedure	Total points for section
Diagnosis and Treatment planning	Treatment plan (15)	75 procedures (15 cases)	2 pts.	150 pts. (10 pts. / case)
	Diet analysis (15)			
	Caries diagnosis & control (15)			
	Caries risk assessment (15)			
	Smile analysis (15)			
Operative	Micro- / Macroabrasion (20)	400 procedures	1 pts.	400 pts.
	Enameloplasty / Reshaping (10)			
	Pit and fissure sealant (35)			
	Resin-modified glass ionomer (15)			
	Preventive resin restoration (40)			
	Amalgam restoration (15)			
	Anterior composite restoration (110)			
	Posterior composite restoration (110)			
Inlay / Onlay (45)				
Prosthodontics	Post & core (50)	150 procedures	2 pts.	300 pts.
	Crown (75)			
	Non-surgical management of TMD (10)			
	Implant fixture (15)			
Esthetics	In-office bleaching (10)	100 procedures	1 pts.	100 pts.
	At-home bleaching (10)			
	Non-vital bleaching (5)			
	Anterior diastema closure (pair) (5)			

Logbook Single Requirements by Section

Section	Procedures types & quantities	Total number of procedures in section	Point per procedure	Total points for section
	Direct composite veneer (20) Indirect porcelain laminate veneer (50)			
Recall	6 months follow-up (5) 1 year follow-up (5)	10 procedures (5 cases)	5 pts.	50 pts. (10 pts. / case)
TOTAL	-	735 procedures	-	1,000 pts.



Observable Procedures

The primary objective of the Observable Procedures (OP) assessment is to judge the competency of the resident in performing commonly faced procedures of the discipline in a standardized manner. It is a method in which the examiner observes the trainee during a routine procedure on a real patient and in a real situation where feedback on the procedure is given to the resident. It is designed to measure the whole aspects of procedural skills and



it is not procedure-specific. OP will be evaluated based on a Direct Observation of Procedural Skills (DOPS) format. Four clinical procedures were selected to be accomplished and fulfilled successfully by the resident during R2 and R3 training levels:

- 1- Anterior composite restoration using layering technique.
- 2- Posterior composite build up restoring at least one missing cusp.
- 3- Ceramic onlay restoration on a vital tooth.
- 4- Porcelain laminate veneers for 2 adjacent teeth.

The resident must accomplish two successful procedures competently at the end of the R2 training level in order to be promoted to the next level. These procedures should be approved, observed, and evaluated using a special DOPS form (refer to Appendix II) by two examiners, one of them should be the program director or any supervisor appointed by the program director. In each clinical procedure, certain steps are considered critical (marked with a star in the form) and the resident should perform them competently and independently. If the resident fails to be competent in these steps and/or receives a score below 60, the whole procedure is considered incomplete and the resident has to repeat it after receiving the feedback. At the end of the clinical encounter, the resident has the right to see the evaluation and the examiner's feedback.

Behavior Domain

In-Training Evaluation Report

Evaluation of the behavioral soft skills such as communication and professionalism is done via utilizing in-training evaluation reports (ITER) following the general scheme of the Mini-Clinical Evaluation Exercise (Mini-CEX). ITER will be created by the program directors at least three times every training year.

Promotion Criteria

In order for the resident to be promoted from the training level to the next, he/she must successfully pass the minimum number of continuous assessments for a particular year based on the grading scheme of the SCFHS:

- R1 and R3: Resident must achieve a score of “Borderline Pass” in all continuous assessments (6 for R1 and 5 for R3). If the resident achieves a score of “Borderline Fail,” from a maximum of two assessments (should not be from the same domain), he/she can be promoted if a score of “Clear Pass” is given in at least two assessments, while the rest of the assessments are “Borderline Pass” level, following the rules and regulation of SCFHS.
- R2: Resident must achieve a score of “Borderline Pass” in all continuous assessments. If the resident achieves a score of “Borderline Fail,” in a maximum of three assessments (should not be from the same domain), he/she can be promoted if a score of “Clear Pass” in at least three assessments is achieved while the rest of the assessments are in the “Borderline Pass” level, following the rules and regulation of SCFHS.
- Residents who fail to achieve the minimum promotion requirements must repeat the training level.

Description	Clear Fail	Borderline Fail	Borderline Pass	Clear Pass
Grade out of 100	< 50%	50 – 59.4%	60 – 69.4%	≥ 70%

Saudi Board Certification Examinations

SBRD certification exams include two parts that the resident needs to pass in order to be certified to practice restorative dentistry as a consultant. Part 1 consists of a written examination that the resident must undertake and pass at the first or second training year. Part 2 can be taken at the end of the third training year and consists of written, OSCE, and SOE sections.

Principles of Restorative Dentistry Examination (Saudi Board Examination: Part I)

Part I Examination of the Saudi Board Certificate shall cover applied basic health sciences related to the restorative specialty.

Requirements to take the examination are as follows:



- Completion of at least nine months of training.
- Valid registration in the Saudi Board Restorative programs.

Final Restorative Dentistry Board Examination (Saudi Board Examination: Part II)

The final examination of Saudi Board Certificates includes the final written examination and the final clinical examination. The final clinical examination consists of the following components: Objective Structured Clinical Examinations (OSCE) and Structured Oral Examinations (SOE).

Objectives:

- Determine the trainee has sufficient competency related to the required specialty.
- Determine the eligibility for entering the final clinical examination.
- Determine the ability of the trainee to practice the profession independently and safely.
- Ensure that the trainee has the necessary clinical competencies relevant to his/her specialty.

Requirements to take the final clinical/practical examination:

- Passing the final written examination of the Saudi Board Certificate.
- The eligibility of the candidate and the number of attempts to take the final clinical/practical examination shall be determined in accordance with the assessment conduct regulations.
- The candidate shall not be allowed to take the final clinical/practical examination once all allowed attempts have been exhausted.

Refer to the regulations of the Saudi Commission for Health Specialties (<https://www.scfhs.org.sa>)

Certification of Training Completion

In order to be eligible to sit for the final specialty examinations, each trainee is required to obtain a “Certification of Training-Completion.” Based on the training bylaws and executive policy (please refer to www.scfhs.org.sa),

trainees will be granted a “Certification of Training-Completion” once the following criteria are fulfilled:

- a. Successful completion of all training rotations.
- b. Completion of training requirements as outlined by the scientific council of specialty.
- c. Clearance from SCFHS training affairs that ensures compliance with tuitions payment and completion of universal topics.

The “Certification of Training-Completion” will be issued and approved by the Shared Training Committee or its equivalent according to SCFHS policies.

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APPENDICES

Appendix I - CanMEDS alignment criteria with Teaching Activities

Alignment of Preclinical Course Objectives with CanMEDs Roles

Topics	Learning objectives (Residents should be able to)	CanMEDS roles
<p>Examination and diagnosis</p> <ul style="list-style-type: none"> - History-taking - Clinical examination - Radiographic interpretation <p>Development of treatment strategies and plans</p> <p>Writing referrals and consultation letters</p>	<p>Lectures and presentations</p> <ol style="list-style-type: none"> 1. List the steps and skills needed to conduct a patient's interview and for medical and dental history-taking. 2. Explain factors in the dental, medical, and social history likely to be relevant to the presenting condition and its previous management. 3. Describe the relevant biology, anatomy, and physiology of normal and abnormal intra-oral and extra-oral structures and tissues. 4. List the steps for the examination of the patient and their: <ul style="list-style-type: none"> - Oral mucosa and related structures - Periodontium - Dental hard tissues and make the appropriate diagnoses. 5. Discuss the systemic factors likely to have a bearing on the above. 6. Identify all types of dental and medical tests and investigations needed for the diagnosis. 7. Consolidate all data from the history, symptoms, examination, and tests to form a final diagnosis. 8. Explain the phases and sequences of writing a treatment strategy in conjunction with the patient and producing a plan according to their needs and preferences, including any future need for revision or modification. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Communicator ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional

Topics	Learning objectives (Residents should be able to)	CanMEDS roles
	<p>9. Explain the importance and procedure involved in using evidence-based dentistry concepts while writing a treatment plan.</p> <p>10. Identify emergency conditions that require immediate treatment.</p> <p>11. Recognize components of a consultation and referral letter.</p> <p>Hands-on and group discussion session</p> <p>1. Use and interpret correctly all appropriate investigations (e.g., radiographic, vitality, hematologic and microbiologic tests, and appropriately articulated study casts) to diagnose oral problems.</p> <p>2. Write down the diagnosis for selected clinical cases (selected clinical photographs and radiographic films).</p> <p>3. Write a treatment plan for selected cases.</p> <p>4. Write consultation letters for selected cases.</p> <p>5. Write referral letters for selected cases.</p>	

Topics	Learning objectives (Residents should be able to)	CanMEDS roles
<p>Basic principles and procedures for FDP</p> <ul style="list-style-type: none"> - Introduction to FDP - Impression materials - Casts - Facebows - Articulators 	<p>Lectures and presentations</p> <ol style="list-style-type: none"> 1. Recognize the scope and importance of fixed prosthodontic treatment. 2. List types of impression material used. 3. Explain the principles and techniques used for making an impression. 4. State the types of bite registration material. 5. Describe the methods used for bite registration. 6. List all types of materials used in laboratory work. 7. Discuss the importance and uses of diagnostic casts. 8. Explain the laboratory procedures for the construction of a cast. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional



Topics	Learning objectives (Residents should be able to)	CanMEDS roles
<ul style="list-style-type: none"> - Interocclusal records, bite registration materials, and techniques - Diagnostic casts 	<ol style="list-style-type: none"> 9. Discuss the purpose of using a facebow. 10. Classify the articulators used in dentistry. 11. Name the parts of the articulators. 12. Describe the procedure for mounting diagnostic casts. <p>Hands-on training session</p> <ol style="list-style-type: none"> 1. Make maxillary and mandibular impressions for residents. 2. Take the bite registration using different materials. 3. Use the facebow on residents. 4. Pour upper and lower impressions using dental stone. 5. Check casts for accuracy and trim them. 6. Transfer the relationship of a patient's maxillary arch and TMJ to an articulator by using a facebow. 7. Mount diagnostic casts on semi-adjustable articulators. 8. Adjust the setting of the articulator. 	
<p>Basic principles and procedures for FDP</p> <ul style="list-style-type: none"> - Principles of occlusion - Occlusal analysis - Diagnostic wax-up 	<p>Lectures and presentations</p> <ol style="list-style-type: none"> 1. Explain the main principles of occlusion. 2. Discuss the importance of and procedure used for occlusal analysis. 3. Discuss the importance and uses of diagnostic wax-up. <p>Hands-on training session</p> <ol style="list-style-type: none"> 1. Mount extracted teeth on alginate impressions. 2. Pour alginate impressions with extracted teeth. 3. Analyze occlusion of the previously mounted casts. 4. Perform diagnostic wax-up. (Laboratory staff will demonstrate these procedures) 5. Adjust wax-up for selected cases. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional

Topics	Learning objectives (Residents should be able to)	CanMEDS roles
<p>Basic principles and procedures of FDP</p> <ul style="list-style-type: none"> - Restoration of endodontically treated teeth - Types of posts and cores 	<p>Lectures and presentations</p> <ol style="list-style-type: none"> 1. Recognize the restorative options following 2. RCT. 3. State the factors influencing the choice of technique used in restoring endodontically treated teeth. 4. Discuss the types of core materials. 5. Lists the steps and instruments used in the preparation of a post space. 6. Discuss the types of post (advantages, disadvantages, and indications). 7. Describe the common mistakes that can be made during the preparation of a post space. 8. Know the types of cement used with a post. 9. Explain the method used to mix dental cement. <p>Hands-on training session</p> <ol style="list-style-type: none"> 1. Perform an initial crown preparation. 2. Build up a core with composite and without apost. 3. Prepare a post space using Pесо reamer drills and a ParaPost system. 4. Cement different posts with different cements. 5. Build up the core with different restorations. 6. Build up a post and core directly on the tooth using resin (Duralay or Pattern Resin GC) 7. Make impressions for the post space to construct a cast post and core indirectly. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional

Topics	Learning objectives (Residents should be able to)	CanMEDS roles
<p>Cariology I</p> <ul style="list-style-type: none"> - Dynamics of dental caries - Diagnosis of caries 	<p>Lectures and presentations</p> <ol style="list-style-type: none"> 1. Explain the dynamics of caries. 2. Discuss the concept of balance and imbalance with regards to dental caries. 3. Explain the factors affecting the dental caries process. 4. Introduce the concepts of critical pH, saturation, demineralization, and remineralization. 5. Justify the appearance of incipient lesions. 6. Demonstrate the optimum method for the diagnosis of caries. 7. Describe the different clinical presentations of caries. 8. Explain the principles of the International Caries Detection and Assessment System. 9. Revise the concepts of sensitivity and specificity. <p>Hands-on training session</p> <ol style="list-style-type: none"> 1. Online training on the International Caries Detection and Assessment System. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional
<p>Cariology II</p> <ul style="list-style-type: none"> - Caries risk assessment and the CAMBRA system, Part 1 - Caries risk assessment and the CAMBRA system, Part 2 	<p>Lectures and presentations</p> <ol style="list-style-type: none"> 1. Explain the role of oral bacteria and biofilm in dental caries. 2. Explain the effect of fluoride and the formation of fluorapatite. 3. Explain the role of diet in the development of caries. 4. Explain the role of saliva in dental caries. 5. Summarize the different salivary tests available. 6. Contrast the different models used to estimate the risk of caries, e.g., CAMBRA. 7. Explain the principles of CAMBRA. 8. Develop preventive and management strategies based on the risk of caries. <p>Hands-on training session</p> <ol style="list-style-type: none"> 1. Perform saliva sampling and analysis. 2. Apply a Cariogram and CAMBRA caries risk models on clinical case scenarios. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional

Topics	Learning objectives (Residents should be able to)	CanMEDS roles
<p>Basic principles and procedures of operative and esthetics</p> <ul style="list-style-type: none"> - Introduction to operative and esthetic dentistry - Factors affecting operative treatment plan - Amalgam, composite, and glass ionomer restorations - Instruments used in operative practice - Dental adhesives 	<p>Lectres and presentations</p> <ol style="list-style-type: none"> 1. Recognize the importance and scope of operative restorative dentistry. 2. State the main factors that can affect the choice of material and technique to be used. 3. List the types, advantages, indications, and contraindications of amalgam, composite, and glass ionomer restorations. 4. Explain the basic principles of amalgam and composite preparations and restorations. 5. Describe the process of polymerization for composites and methods to reduce polymerization shrinkage and stress. 6. Describe the technique of matrix application, incremental placement, and finishing and polishing for composite resins. 7. Recognize the types of adhesive systems. <p>Hands-on training session</p> <ol style="list-style-type: none"> 1. Prepare Class II, Class IV, and Class V composite resin restorations. 2. Apply matrix band and wedge. 3. Restore cavities with composite restorations. 4. Build up a Class IV composite restoration using the multi-layering technique. 5. Perform a finishing and polishing procedure for composite restorations. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional
<p>Basic principles and procedures in operative and esthetics</p> <ul style="list-style-type: none"> - Main principles in esthetic, colors, and shade selection 	<p>Lectures and presentation</p> <ol style="list-style-type: none"> 1. Define esthetics and recognize the basic artistic elements that need to be considered to ensure optimal esthetic results. 2. State the scientific basis of color. 3. Explain the steps in the color replication process (shade selection and duplication). 4. Explain the methods used in the main shade guide systems. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional



Topics	Learning objectives (Residents should be able to)	CanMEDS roles
<ul style="list-style-type: none"> - Conservative treatments for discolored teeth - Inlays and onlays - Esthetic veneers 	<ol style="list-style-type: none"> 5. Recognize the different types and causes of tooth discoloration. 6. Describe the strategies applied in the management of discolored teeth (bleaching, microabrasion, and macroabrasion). 7. Describe the techniques, indications, and contraindications for the restoration of ceramic inlays and onlays. 8. Describe the types, techniques, indications, and contraindications for the preparation and restoration of esthetic veneers, both direct and indirect. 9. Describe the techniques used for the fabrication of provisional restorations. 	

Topics	Learning objectives (Residents should be able to)	CanMEDS roles
<p>Basic principles and procedures of FDP</p> <ul style="list-style-type: none"> - Basic principles of treatment planning for teeth - Restorations and replacement - Principles of tooth preparation - Provisional restorations 	<p>Hands-on training session</p> <ol style="list-style-type: none"> 1. Use the different types of shade guide systems. 2. Perform inlay cavity preparation. 3. Perform onlay cavity preparation. 4. Cement onlay porcelain with resin cement. 5. Prepare a tooth for esthetic veneer utilizing a butt joint design. 6. Prepare a tooth for esthetic veneer utilizing a feathered incisal edge design. 7. Prepare a tooth for esthetic veneer utilizing a palatal chamfer design. 8. Fabricate provisional restorations for the preparation of the veneer. 9. Restore a tooth using a composite esthetic veneer. 10. Cement porcelain veneer with resin cement. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional

Topics	Learning objectives (Residents should be able to)	CanMEDS roles
	<p>Lectures and presentations</p> <ol style="list-style-type: none"> 1. Acquire basic concepts for diagnosis and treatment planning to restore and replace teeth and short edentulous spans. 2. Discuss the main principles of crown and bridge preparation. 3. List the types of provisional restoration. 4. Describe the techniques for constructing provisional restorations. <p>Hands-on training session</p> <ol style="list-style-type: none"> 1. Perform single crown preparations with different margin designs (mounted teeth). 2. Perform teeth preparation for FPD (mounted teeth). 3. Fabricate an appropriate provisional restoration. 	



Topics	Learning objectives (Residents should be able to)	CanMEDS roles
<p>Periodontal consideration</p> <ul style="list-style-type: none"> - Basic concepts in Periodontics - Components of gingiva - Periodontal disease classification - Periodontal examination - Periodontic indices - Biological width - Introduction to management - Introduction to periodontal surgery 	<p>Lectures and presentations</p> <ol style="list-style-type: none"> 1. Recognize the basic concepts used in periodontics. 2. List the parts of the gingiva. 3. Differentiate between normal and diseased gingiva. 4. Identify the main classification of periodontal diseases. 5. List the steps of clinical examination and assessment methods to arrive at a periodontal diagnosis (probing depth, bleeding index, clinical attachment level, radiographic evidence of bone loss, and the presence or absence of signs and symptoms in the patient). 6. Explain the meaning and importance of biological width. 7. Name the main periodontal treatment modalities used. 8. Identify the different periodontal surgical therapies and their indications. 9. Discuss the healing period after surgical crown lengthening. <p>Hands-on training session</p> <ol style="list-style-type: none"> 1. Perform complete periodontal examinations on residents. 2. Observe surgical crown lengthening and gingivectomy using an electrosurgery machine (video). 3. Assess the need for periodontal treatment or surgery (from selected clinical pictures and radiographs). 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional

Topics	Learning objectives (Residents should be able to)	CanMEDS roles
<p>Basic principles and procedures for FDP</p> <ul style="list-style-type: none"> - Tissue management - Final impression making - Interocclusal record - Working cast and die - Pindex system - Die preparation 	<p>Lectures and presentations</p> <ol style="list-style-type: none"> 1. Discuss indications for tissue management. 2. Describe the different methods of gingival tissue displacement and hemostasis. 3. Discuss the requirements of an ideal final impression. 4. Discuss the requirements of an ideal working cast. 5. Describe the different materials and techniques used for a die system. 6. List the steps of the Pindex system and die preparation. <p>Hands-on training session</p> <ol style="list-style-type: none"> 1. Make a standard final impression. 2. Pour final impression. 3. Construct proficient working casts with removable dies. 4. Perform die trimming and determine the finish line with a red-blue pencil. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional

Topics	Learning objectives (Residents should be able to)	CanMEDS roles
<p>Basic principles and procedures for FDP</p> <ul style="list-style-type: none"> - Wax patterns - Investing, casting, and finishing and polishing of cast restorations - Dental alloy - Dental porcelain 	<p>Lectures and presentations</p> <ol style="list-style-type: none"> 1. Explain the steps of wax pattern fabrication. 2. Explain the laboratory procedures for the construction of cast restorations. 3. Identify all types of dental laboratory materials. 4. Describe the different types of ceramics used. 5. Describe the different types of metal alloy used in a porcelain-fused-to-metal prosthesis. <p>Hands-on training session</p> <ul style="list-style-type: none"> • Attend a demonstration by laboratory production staff on wax-up, investing, casting, and finishing and polishing cast restorations. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional



Topics	Learning objectives (Residents should be able to)	CanMEDS roles
<p>Basic principles and procedures for FDP</p> <ul style="list-style-type: none"> - Framework designs for metal ceramic restoration - Metal-ceramic restorations - All-ceramic restorations 	<p>Lectures and presentations</p> <ol style="list-style-type: none"> 1- Recognize the importance and procedure of framework designs for a metal-ceramic restoration. 2- State the laboratory steps for fabricating metal-ceramic restorations. 3- State the laboratory steps for fabricating all-ceramic restorations. <p>Hands-on training session</p> <ul style="list-style-type: none"> - Attend a demonstration by laboratory production staff. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional
<p>Basic principles and procedures for FDP</p> <ul style="list-style-type: none"> - Metal and porcelain try-in - Characterization and glazing - Cementation 	<p>Lectures and presentations</p> <ol style="list-style-type: none"> 1. Explain the steps of clinical try-in for crowns. 2. State the advantages, disadvantages, and steps of stain application. 3. List the types of luting agents used for cementation. 4. Explain the correct technique for cementation. <p>Hands-on training session</p> <ol style="list-style-type: none"> 1. Apply the try-in steps for metal and porcelain crowns (demonstration) 2. Use the staining kit for color modification and characterization (demonstration) 3. Cement porcelain-fused-to-metal crown with zinc phosphate (video) 4. Cement all-ceramic crown with resin cement (video) 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional

Topics	Learning objectives (Residents should be able to)	CanMEDS roles
Introduction to Dental implants I	<p>Lectures and presentations</p> <ol style="list-style-type: none"> 1. Describe the history and types of dental implants. 2. Identify implant terminology. 3. Explain the process for reaching an appropriate treatment plan. 4. Describe the components of a dental implant. 5. Describe the steps for the surgical component of the implant. 6. Recognize the healing period for the surgical component. 7. Identify the prosthetic components of the implant. 8. Name the types of implant systems. 9. State the types of crown (cemented and screwed types), along with their indications, contraindications, advantages, and disadvantages. 10. Describe the different techniques for taking an impression. 11. Explain the meaning and techniques of torquing. <p>Hands-on training session</p> <ol style="list-style-type: none"> 1. Watch the surgical component of an implant (video). 2. Watch the prosthodontics component of an implant (video). 3. Make a final impression for an implant using the open tray technique. 4. Make a final impression for an implant using the closed tray technique. 5. Perform torquing on the screwed-type crown. 6. Perform torquing on the abutment. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional
Dental implants II	Workshop	

Alignment of Research Module Objectives with CanMEDs Roles

Topics	Objectives (Residents will be able to)	Teaching methods	CanMEDS Framework roles
Introduction to scientific research	<ol style="list-style-type: none"> 1. Define research. 2. Discuss its importance. 3. List the types of research. 4. Explain the meaning and principles of evidence-based dentistry. 5. List the steps of conducting research. 6. Identify the skills needed to design and conduct research. 7. Recognize sources of information, articles, and data. 8. Open an account in PubMed (workshop). 	<ul style="list-style-type: none"> ✓ Lecture. ✓ Group discussion. ✓ Workshop. 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional
Ethics in scientific research	<ol style="list-style-type: none"> 1. Recognize research ethics (Ethics Training Module: http://www.pre.ethics.gc.ca/eng/index/) 2. Present principles of the Declaration of Helsinki (ethics) 3. Present principles of the Belmont Report (ethics) 4. Select a research group and/or supervisor. 	<ul style="list-style-type: none"> ✓ Assignment (residents need to submit a certificate of ethics by answering questions in the training module (website: Panel on Research Ethics). ✓ Residents will present principles of the Declaration of Helsinki and Belmont Report in front of each other. 	
Literature review	<ol style="list-style-type: none"> 1. Describe the meaning of a literature review. 2. Discuss the importance of a literature review. 3. List the steps in conducting a literature review. 4. Apply methods of writing to the introduction section of the 	<ul style="list-style-type: none"> ✓ Lecture. ✓ Group discussion. ✓ Residents will review and critique the introduction section of a selected article in a group. ✓ Residents will write the 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional

Topics	Objectives (Residents will be able to)	Teaching methods	CanMEDS Framework roles
	manuscript. 5. Critique literature reviews of published articles.	introduction section for a literature review of a selected topic (workshop).	
Research problem and objectives	<ol style="list-style-type: none"> 1. Define the research problem and purpose. 2. Explain the importance of the research problem. 3. Identify purpose statements, research questions, hypotheses, and objectives 4. Formulate a hypothesis. 5. Formulate a research objective. 6. Discuss the process of developing a research question. 7. Apply objective methods of writing research. 8. Critique research objectives of published articles. 	<ul style="list-style-type: none"> ✓ Lecture. ✓ Group discussion. ✓ Residents will review and critique the introduction section and objectives of the selected article in a group. ✓ Residents will write the research objectives for the selected topic (workshop). 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional
Introduction to referencing	<ol style="list-style-type: none"> 1. Define a reference and a citation. 2. List the different types of referencing styles. 3. Understand the meaning of plagiarism. 4. Write statements/paragraphs with citations and references. 5. Attend an EndNote hands-on workshop. 	<ul style="list-style-type: none"> ✓ Lecture. ✓ Group discussion. ✓ Residents will review and identify the type of references for a selected article in a group. ✓ Residents will attend an EndNote hands-on workshop. ✓ Residents will write statements or a paragraph with citations and references using the EndNote program. 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional



Topics	Objectives (Residents will be able to)	Teaching methods	CanMEDS Framework roles
		<ul style="list-style-type: none"> ✓ Residents will write statements or a paragraph with different referencing styles. 	
Study design/research methodology	<ol style="list-style-type: none"> 1. Describe the characteristics of quantitative, qualitative, and mixed methods research. 2. Explain quantitative study design (research methodology). 3. Describe descriptive studies and analytical studies. 4. Describe experimental research, quasi-experimental, and non-experimental quantitative research. 5. Discuss the steps in conducting experimental research. 6. Explain the meaning and uses of correlational research. 7. Explain the meaning of causation and association research. 8. Critique study designs of published articles. 	<ul style="list-style-type: none"> ✓ Lecture. ✓ Group discussion. ✓ Residents will review and critique the methods section of a selected article. ✓ Residents will identify the type of study design used in a selected article. 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional
Types of variables, confounding modifiers, IRB, sampling techniques, and data collection	<ol style="list-style-type: none"> 1. List the types of variables. 2. Define confounding and modifier variables. 3. List the types of bias found in research. 4. Discuss the process of quantitative data collection. 5. Explain sampling techniques. 6. Explain how to obtain a sample. 7. List the types of data collection tools (instruments that will be 	<ul style="list-style-type: none"> ✓ Lecture. ✓ Group discussion. ✓ Residents will review and critique the methods section of a selected article. ✓ Residents will identify types of variables in a selected article. ✓ Residents will identify the sampling technique 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional

Topics	Objectives (Residents will be able to)	Teaching methods	CanMEDS Framework roles
	<p>used to collect data).</p> <p>8. Define the different methods of data collection (tests, questionnaires, interviews, focus groups, observation).</p> <p>9. Critique types of variables and sampling techniques used in published articles.</p>	used in a selected article.	
Questionnaires and standardized measurement	<p>1. Discuss types of questionnaires.</p> <p>2. List the steps of the construction of an instrument (questionnaire).</p> <p>3. Identify standardized measurement and assessment (including scales of measurement, validity, and reliability).</p> <p>4. Discuss methods used to administer tools for data collection.</p>	<ul style="list-style-type: none"> ✓ Lecture. ✓ Group discussion. ✓ Residents will review and critique questionnaires mentioned in a selected article in a group. ✓ Residents will construct a questionnaire. ✓ Residents will select a research topic to be conducted during the program. 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional
Qualitative study design	<p>1. Identify qualitative study design (grounded theory research, ethnographic research, narrative research).</p> <p>2. Explain the process of qualitative data collection.</p> <p>3. Discuss how to analyze and interpret qualitative data.</p>	<ul style="list-style-type: none"> ✓ Lecture. ✓ Group discussion ✓ Resident will review and critique a qualitative study design in a selected article in a group. ✓ Identify type of qualitative study design in a selected article. 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional
Biostatistics I	<p>1. Identify the basics of biostatistics.</p> <p>2. Explain how to interpret quantitative data.</p>	<ul style="list-style-type: none"> ✓ Lecture. ✓ Group discussion. ✓ Residents will review 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Leader ✓ Scholar



Topics	Objectives (Residents will be able to)	Teaching methods	CanMEDS Framework roles
	3. Explain the data management process. 4. Discuss the process of quantitative data analysis. 5. Conduct descriptive analysis. 6. Conduct inferential analysis.	and critique the statistical section of the selected article in a group. ✓ Residents will discuss a descriptive and inferential analysis of data.	✓ Professional
Biostatistics II	1. Describe how to analyze data. 2. Describe how to present tables, figures, and results. 3. Attend a hands-on SPSS workshop.	✓ Lecture. ✓ Group discussion. ✓ Residents will review and critique the statistical section of a selected article in a group. ✓ Residents will discuss a descriptive and inferential analysis of data. ✓ Residents will enter research data in the SPSS program and analyze it. ✓ Residents will arrange data in tables and figures.	✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional
Research proposal	1. Describe the contents of a research proposal. 2. Apply learned writing methods when writing the proposal.	✓ Lecture. ✓ Group discussion. ✓ Residents will complete a mini proposal form in a group. ✓ Residents will present their mini proposal.	✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional

Topics	Objectives (Residents will be able to)	Teaching methods	CanMEDS Framework roles
Discussion	<ol style="list-style-type: none"> 1. Identify the content of the discussion section. 2. Discuss the methods used to write the discussion section. 	<ul style="list-style-type: none"> ✓ Lecture. ✓ Group discussion. ✓ Residents will review and critique the discussion section of a selected article. 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional
Conclusion - Abstract - Title - Authorship Acknowledgements - Publication - Poster	<ol style="list-style-type: none"> 1. Identify the contents of the conclusion. 3. Identify the contents of the abstract. 4. Know the types of titles. 5. State how to present authorship. 6. Describe how to write acknowledgements. 7. Explain the process of publication. 8. Discuss how to design a poster presentation. 9. presentation. 	<ul style="list-style-type: none"> ✓ Lecture. ✓ Group discussion. ✓ Residents will review and critique the conclusion, abstract, and title of a selected article in a group. ✓ Design a poster using the PowerPoint program. ✓ Discuss the publication process for a target journal. 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional
Research grants	<ol style="list-style-type: none"> 1. Explain the process of applying for a research grant. 2. Discuss the steps of critiquing research. 	<ul style="list-style-type: none"> ✓ Lecture. ✓ Group discussion. ✓ Residents will review and critique some selected articles in a group. ✓ Residents will use a checklist to critique the selected articles. 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Leader ✓ Scholar ✓ Professional
Presentation of proposal	<ol style="list-style-type: none"> 1. Submission of initial draft results at The end of R2. 2. Submission of the initial draft of discussion in the middle of R3. 3. Submission of manuscript at end of R3. 		



Topics	Objectives (Residents will be able to)	Teaching methods	CanMEDS Framework roles
	4. Submission of poster at beginning of R4. 5. Research presentation at beginning of R4.		

Alignment of Educational Methods and Professional Development Topics with CanMEDs Roles

Lecture/Workshop	Content	CanMEDS competencies
1. New approaches, concepts, and strategies in medical education	<ul style="list-style-type: none"> - Challenges and reasons for changes in medical education. - Outcome/competency-based education. - Problem-based learning. - Case-based learning. - Practice-based learning. - Community-based education. - Patient-centered education. - Student-centered learning. - E-learning. - Evidence-based medicine. - Active learning. - Problem-solving and critical thinking. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Collaborator ✓ Scholar ✓ Professional
2. Principles of adult learning and learning styles	<ul style="list-style-type: none"> - Definition of andragogy. - Principles of adult learning. - Differences between pedagogy and andragogy. - Applying principles of adult learning to training. - Different styles of learning. 	<ul style="list-style-type: none"> ✓ Scholar ✓ Leader
3. Teaching methods	<ul style="list-style-type: none"> - Principles of teaching. - Innovative and traditional methods of teaching. - Advantages and disadvantages of the different teaching methods. 	<ul style="list-style-type: none"> ✓ Scholar ✓ Professional
4. Educational objectives	<ul style="list-style-type: none"> - Definition and rationale. - Taxonomy of educational objectives. - How to write educational objectives. 	<ul style="list-style-type: none"> ✓ Scholar

Lecture/Workshop	Content	CanMEDS competencies
5. Problem-based learning	<ul style="list-style-type: none"> - Definition and rationale. - Steps of practice-based learning. - Roles of group members. 	<ul style="list-style-type: none"> ✓ Scholar ✓ Leader
6. Self-directed learning	<ul style="list-style-type: none"> - Definition and rationale. - Principles of SDL. - Steps of SDL. - Advantages of SDL. - Perception of SDL. 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Scholar ✓ Professional
7. Group dynamics and teamwork	<ul style="list-style-type: none"> - Definition of group dynamics and behavior that affects the group process. - Stage of group development. - Functions and ground rules in group work. - Nature of teamwork. - Steps for creating an effective team. - Importance of teamwork in education and health care. 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Professional
8. Assessment and new methods of assessment	<ul style="list-style-type: none"> - Definition of assessment. - Summative and formative assessments. - Extended matching items versus MCQ. - Objective structured clinical and practical examinations. - Portfolio. - Work-based assessments. 	<ul style="list-style-type: none"> ✓ Scholar
9. Feedback and self-reflection	<ul style="list-style-type: none"> - Definition of feedback and self-reflection. - The importance and effect of feedback and self-reflection on learning outcomes. 	<ul style="list-style-type: none"> ✓ Scholar ✓ Collaborator ✓ Professional
10. Presentation skills	<ul style="list-style-type: none"> - Rationale for and basic components of an oral presentation. - Steps for preparing and creating effective presentations. - Manage the presentation environment. - Use visual aids and support materials. - Understand and overcome fear and anxiety of public speaking and gaining confidence and control. - Balancing verbal and non-verbal messages to engage listeners. - Maximizing vocal delivery. - Body language tips and techniques. - Interacting with and handling questions from the audience. 	<ul style="list-style-type: none"> ✓ Collaborator ✓ Scholar ✓ Professional



Lecture/Workshop	Content	CanMEDS competencies
11. Study and learning skills	<ul style="list-style-type: none"> - The process of studying. - The importance of study skills. - Effective learning/study skills. 	✓ Scholar
12. Writing skills	<ul style="list-style-type: none"> - The importance of and types of writing. - Strategies to improve writing. - Essential steps and process for writing assignments. - Definition of plagiarism. - Strategies that minimize the potential for plagiarism. 	✓ Scholar
13. Leadership skills	<ul style="list-style-type: none"> - Concept of leadership and the importance of leadership skills. - Differences between a leader and a manager. - Skills of an effective leader. - Techniques for dealing with conflict. - Aspects of leadership in health care. 	✓ Collaborator ✓ Professional ✓ Leader
14. Communication skills and professionalism	<ul style="list-style-type: none"> - Meaning and relevance of communication skills in health sciences education and training. - Importance of effective communication skills in practice. - Communication skills in the context of health sciences education. - Definition and elements of professionalism. - Competencies needed for dentists as communicators and professionals according to the CanMEDS competency framework. 	✓ Collaborator ✓ Communicator ✓ Professional
15. Workshop design	<ul style="list-style-type: none"> - Definition and importance of workshops. - Workshops as an educational and developmental tool. - Essential steps for designing an effective workshop. 	✓ Collaborator ✓ Leader ✓ Professional
16. Time management	<ul style="list-style-type: none"> - Definition and advantages of time management. - Steps and skills needed to manage time. - Implementation of time management in practice. 	✓ Professional ✓ Medical expert
17. Faculty development	<ul style="list-style-type: none"> - Definition and principles of faculty development and their rationale. - Effects of faculty development interventions on knowledge, attitudes, and skills of health care professionals and the institutions in which they work 	✓ Scholar ✓ Professional

Lecture/Workshop	Content	CanMEDS competencies
18. Program evaluation	<ul style="list-style-type: none"> - Definition and principles of program evaluation. - Purpose of program evaluation in education. - Evaluation according to Bloom's taxonomy of educational objectives. - Relevance of evaluation to the learning process. 	<ul style="list-style-type: none"> ✓ Scholar ✓ Leader
19. Dental practice management	<ul style="list-style-type: none"> - Business management, including third-party payment and professional practice development. - Management of auxiliaries and other office personnel. - Maintenance and management of patient records. - Book-keeping/accounting. - Office design and arrangement and placement of equipment. - - New technology in practice. 	<ul style="list-style-type: none"> ✓ Leader ✓ Professional ✓ Communicator ✓ Collaborator

Alignment of Clinic-Based Learning with CanMEDs Roles

Activity	Objective (Residents will be trained to)	CanMEDS competencies
Clinical- based learning	<ul style="list-style-type: none"> - Elicit a detailed medical and dental history using patient-centered interviewing skills. - Carry out a thorough and appropriate assessment and examination of oral and extra-oral structures of a patient and make appropriate diagnoses. - Complete a thorough examination of any existing restoration, RCT, prostheses, implants, and related tissues and structures, evaluating the biological and esthetic quality of each. - Conduct a periodontal examination, charting, and diagnosis. - Use and interpret correctly all appropriate investigations. - Use evidence-based decision-making. - Use all clinical examination, history, and investigation findings to develop alternative and effective treatment strategies. - Develop communication skills by deciding the treatment strategy in conjunction with the patient and producing a 	<ul style="list-style-type: none"> ✓ Dental expert ✓ Communicator ✓ Collaborator ✓ Scholar ✓ Health advocate ✓ Professional



Activity	Objective (Residents will be trained to)	CanMEDS competencies
	<p>plan according to their needs and preferences.</p> <ul style="list-style-type: none"> - Work with other health professionals to develop an effective treatment plan and provide high-quality, safe, and patient-centered care. - Write consultation and referral letters. - Advise patients on preventive methods. - Manage emergencies and traumatic injuries. - Master skills of all restorative procedures (operative, prosthodontic, and esthetic) - Provide restorative, conservative, and esthetic treatment using different materials and techniques - Provide an appropriate periodontal restorative treatment plan and management. - Provide all types of fixed prosthodontic therapy using the appropriate techniques, materials, and technologies available for all types of fixed dental prostheses and restorations. - Diagnose and manage significant occlusal conditions and disorders. - Diagnose oral parafunction and other factors in the development of dysfunction of mandibular movements and the TMJ, and provide behavioral advice for management of these problems. - Diagnose, generate an appropriate treatment plan, and provide the best treatment methods for the different occlusal problems. - Construct appropriate occlusal appliances for the treatment of these problems. - Provide full mouth rehabilitation treatment following all recommended steps. - Provide dental implant therapy in multiple clinical circumstances. - Liaise appropriately with dental technicians with respect to necessary laboratory requirements. 	

Activity	Objective (Residents will be trained to)	CanMEDS competencies
	<ul style="list-style-type: none"> - Use conscious sedation techniques in conjunction with appropriate specialists. - Recognize the importance of working with a team of health professionals in patient management. - Apply ethical and humanistic principles in clinical care. - Supervise junior residents or undergraduate students (for seniors). - Improve collaboration skills by receiving instructions and feedback from supervisor or colleagues. 	

Alignment of Case-Based Discussion with CanMEDs Roles

Activity	Objective (Residents will be trained to)	CanMEDS competencies
Presentation of advanced cases	<ul style="list-style-type: none"> - Present a comprehensive case with a detailed history, examination, and description of the investigation tools used. - Recognize social, systemic, and oral factors that influence the treatment plan and prognosis. - Present the consultation reports and outline their influence on the treatment strategy. - Formulate an appropriate differential diagnosis and alternative treatment plans. - Incorporate evidence into the treatment plan, techniques, and selection of materials. - Follow the ideal sequence in patient management. - Document comprehensive cases following the recommended format. - Present follow-up of a patient's case. - Expose other residents to different cases and treatment modalities. - Improve presentation skills by regularly seeking feedback on presentations. 	<ul style="list-style-type: none"> ✓ Dental expert ✓ Scholar



Alignment of Treatment Planning Sessions with CanMEDs Roles

Activity	Objective (Residents will be trained to)	CanMEDS competencies
Treatment plan sessions	<ul style="list-style-type: none"> - Develop competence in short presentations on comprehensive cases. - Formulate a correct diagnosis based on history, clinical examination, investigations, and consultation. - Develop the best treatment strategy after discussing the case with supervisors. - Expose other residents to dental cases with different problems and treatment strategies. 	<ul style="list-style-type: none"> ✓ Dental expert ✓ Scholar
Case-based learning	<ul style="list-style-type: none"> - Develop skills in analytical thinking and reflective judgment by reading and discussing complex, real-life scenarios. - Formulate a correct diagnosis based on history and investigations. - Develop the best treatment strategy after discussing the case. - Students are encouraged to interact with each other in team projects. - Explore educational sources beyond the required textbooks. 	<ul style="list-style-type: none"> ✓ Dental expert ✓ Scholar ✓ Leader ✓ Collaborative

Alignment of Literature Review Sessions with CanMEDs Roles

Activity	Objective (Residents will be trained to)	CanMEDS competencies
Literature review and Journal Club	<ul style="list-style-type: none"> - Present the summarized assigned or selected articles to other residents and consultants. - Review literature related to restorative dentistry to improve decision-making and patient care. - Acquire knowledge about the different types of studies and methodologies. - Critically appraise the published articles. - Keep up to date with the literature. - Recognize classical and current published articles and case reports impacting the practice of restorative dentistry. - Identify areas of controversy in areas of restorative dentistry disciplines. 	<ul style="list-style-type: none"> ✓ Scholar ✓ Medical expert ✓ Health advocate

Alignment of Self-Directed Learning Activities with CanMEDs Roles

Activity	Objective (Residents will be trained to)	CanMEDS competencies
Self-directed learning	<ul style="list-style-type: none"> - Take responsibility for personal learning above and beyond responding to instruction. - Develop independence, confidence, and awareness of available resources. - Predict personal learning needs and objectives. - Develop searching and reading skills using relevant journals and books. - Develop an interest in further learning beyond the essential core curriculum. - Develop lifelong learning skills. - Encourage critical thinking skills. - Maintain a personal portfolio. 	<ul style="list-style-type: none"> ✓ Dental expert ✓ Scholar ✓ Professional

Alignment of Community Service Activities with CanMEDs Roles

Activity	Objective (Residents will be trained to)	CanMEDS competencies
Community service	<ul style="list-style-type: none"> - Participate in local organizations that benefit the community as a whole. - Demonstrate respect for all people regardless of culture and socioeconomic background. - Develop experience in volunteering activities. - Encourage residents to interact with each other in a community project. - Become active members of the community when they have their own practices. - Assess the needs of a community. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Communicator ✓ Collaborator ✓ Health advocate ✓ Professional ✓ Leader



Alignment of Elective Courses with CanMEDs Roles

Activity	Objective (Residents will be trained to)	CanMEDS competencies
Elective (special interest) module	<ul style="list-style-type: none"> - Select modules they expect to find interesting and encouraging intrinsic motivation and a deeper approach to learning. - Gain additional experience within the sphere of interest of the trainee from units and staff locally or abroad. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Communicator ✓ Collaborator ✓ Professional

Alignment of Supplementary Courses and Workshops with CanMEDs Roles

Activity	Objective (Residents will be trained to)	CanMEDS competencies
Supplementary courses, workshops, and guest speaker lectures	<ul style="list-style-type: none"> - Keep up to date with the latest advances in restorative dentistry materials and techniques. - Identify and practice modern clinical procedures. - Benefit from the experience and knowledge of local and international speakers. - Acquire knowledge and skills in advanced areas of restorative dentistry. 	<ul style="list-style-type: none"> ✓ Medical expert ✓ Scholar



Appendix II - Clinic-Based Learning Forms

Academic Schedule Example

Training Year General Schedule			
Month	R1	R2	R3
October	Orientation	Clinical Training	Clinical Training
November	Preclinical Course	Academic Instruction	Academic Instruction
December	Research Module		
January	Clinical Training		
February	Academic Instruction		
March			
April			
May			
June			
July			
August			
September			



Training Week General Schedule			
Day	AM		PM
Sunday	Treatment planning session	Clinical training	Clinical training
Monday	Clinical training		Clinical training
Tuesday	Clinical training		Clinical training
Wednesday	Weekly Scientific Activities (Interactive lectures/resident's presentations/literature review/guest speakers/workshops)		Weekly Scientific Activities (Interactive lectures/resident's presentations/literature review/guest speakers/workshops)
Thursday	Clinical training Supplementary or professional development courses, lectures, and workshops Community service		Clinical training Supplementary or professional development courses, lectures, and workshops Community service

 <p style="text-align: center;">Saudi Board in Restorative Dentistry Annual Logbook Accomplishment Guide</p> 	
Resident's Name:	Level: <input type="radio"/> R1 <input type="radio"/> R2 <input type="radio"/> R3
Date:	Category: <input type="radio"/> A1 <input type="radio"/> A2 <input type="radio"/> A3
Training Center:	Region: <input type="radio"/> 1 st <input type="radio"/> 2 nd <input type="radio"/> 3 rd <input type="radio"/> 4 th <input type="radio"/> 5 th

Section/Procedure	Code	3 year Requirements	Minimum requirements per year			Number of finished procedures			Remarks
			R1	R2	R3	R1	R2	R3	
I. Diagnosis and Treatment planning									
- Treatment plan	TX-1	A1 15 A2 10 A3 6	4	9 4	15 10 6				
- Diet analysis	TX-2	A1 15 A2 10 A3 6	4	9 4	15 10 6				
- Caries diagnosis & control	TX-3	A1 15 A2 10 A3 6	4	9 4	15 10 6				
- Caries risk assessment	TX-4	A1 15 A2 10 A3 6	4	9 4	15 10 6				
- Smile analysis	TX-5	A1 15 A2 10 A3 6	4	9 4	15 10 6				
II. Operative									
- Micro- / Macroabrasion	O-4	A1 20 A2 15 A3 10	5	10 5	20 15 10				
- Enameloplasty / Reshaping	O-5	A1 10 A2 8 A3 5	2	5 3	10 8 5				
- Pit and fissure sealant	OP-3	A1 35 A2 25 A3 20	10	20 10	35 25 20				
- Resin-modified glass ionomer	OP-4	A1 15 A2 10 A3 5	5	10 5	15 10 5				
- Preventive resin restoration	O-15	A1 40 A2 30 A3 20	10	25 15	40 30 20				
- Amalgam restoration	O-6 O-8	A1 15	5	10 5	15 10 5				
- Class II		A2 10							
- Build-up		A3 5							
- Anterior composite restoration	O-9	A1 110 A2 70 A3 50	40	70 40	110 70 50				Minimum of 15 from each procedure
- Class II, IV, V	O-11								
- Build-up									



Section/Procedure	Code	3 year Requirements	Minimum requirements per year			Number of finished procedures			Remarks
			R1	R2	R3	R1	R2	R3	
- Posterior composite restoration - Class I, II, V, VI - Build-up	0-10 0-13	A1 110 A2 70 A3 50	40	70 40	110 70 50				Minimum of 15 from each procedure except class IV
- Inlay / Onlay - Metal - Ceramic	0-18 0-17	A1 45 A2 30 A3 20	5	20 10	45 30 20				
III. Prosthodontics									
- Post & core - Prefabricated post & core metal - Prefabricated post & core esthetic - Cast post & core	P-1 P-2 P-3	A1 50 A2 30 A3 20	10	30 15	50 30 20				Minimum of 5 cast post & core
- Crown - Porcelain-fused-metal - All ceramic	P-4 P-5	A1 75 A2 55 A3 40	15	40 25	75 55 40				Minimal anterior A1: 35 A2: 25 A3: 20
- Non-surgical management of TMD	P-7	A1 10 A2 5 A3 3	2	5 2	10 5 3				
- Implant fixture	P-6	A1 15 A2 12 A3 8	-	7 5	15 12 8				
IV. Esthetics									
- In-office bleaching	0-1	A1 10 A2 7 A3 5	2	5 3	10 7 5				
- At-home bleaching	0-2	A1 10 A2 6 A3 4	2	5 3	10 7 5				
- Non-vital bleaching	0-3	A1 5 A2 4 A3 3	1	3 2	5 4 3				
- Anterior diastema closure (pair)	0-12	A1 5 A2 3 A3 2	1	3 1	5 3 2				

Section/Procedure	Code	3 year Requirements	Minimum requirements per year			Number of finished procedures			Remarks
			R1	R2	R3	R1	R2	R3	
- Direct composite veneer	O-19	A1 20 A2 15 A3 10	5	10 5	20 15 10				
- Indirect porcelain veneer	O-20	A1 50 A2 40 A3 30	15	35 15	50 40 30				
V. Recall									
- 6 months follow-up ECE	RC-1	A1 5 A2 3 A3 2	-	2 1	5 3 2				
- 1 year follow-up ECE	RC-2	A1 5 A2 3 A3 2	-	2 1	5 3 2				
VI. Comprehensive Esthetic Cases (CECs)									
- Simple (100 points/case)	CEC-S	A1 15 A2 10 A3 6	4	9 4	15 10 6				Minimum number of CECs / year depends on the corresponding points rather than the actual number of cases
- Moderate (200 points/case)	CEC-M								
- Complex (300 points/case)	CEC-C								



RDITN/Medical Assessment

ASA 1	A normal healthy patient	
ASA 2	A patient with mild systemic disease without substantive functional limitations	
ASA 3	A patient with severe systemic disease with substantive functional limitations	
ASA 4	A patient with severe systemic disease that is a constant threat to life	
ASA 5	A moribund patient who is not expected to survive without the operation	
ASA 6	A patient declared brain-dead and whose organs are being removed for donation purposes	
Simple medical history	Complex medical history	
ASA 1–2	ASA 3–5 Medical history that significantly affects clinical management and outcome/need for premedication.	

RDITN/Periodontal Assessment

Basic periodontal examination	
0	No bleeding or pocketing detected
1	Bleeding on probing - no pocketing exceeding 3.5 mm
2	Plaque retentive factors present - no pocketing exceeding 3.5 mm
3	Pockets 3.5 mm to 5.5 mm in depth (color-coded area partially visible)
4	Pockets > 5.5 mm in depth

CAMBRA Form

Caries Risk Assessment Form — Children Age 6 and Over/Adults

Patient Name: _____ Chart #: _____ Date: _____

Assessment Date: Is this (please circle) **base line** or **recall**

Disease Indicators (Any one "YES" signifies likely "High Risk" and to do a bacteria test**)	YES = CIRCLE	YES = CIRCLE	YES = CIRCLE
Visible cavities or radiographic penetration of the dentin	YES		
Radiographic approximal enamel lesions (not in dentin)	YES		
White spots on smooth surfaces	YES		
Restorations last 3 years	YES		
Risk Factors (Biological predisposing factors)		YES	
MS and LB both medium or high (by culture**)		YES	
Visible heavy plaque on teeth		YES	
Frequent snack (> 3x daily between meals)		YES	
Deep pits and fissures		YES	
Recreational drug use		YES	
Inadequate saliva flow by observation or measurement (**If measured, note the flow rate below)		YES	
Saliva reducing factors (medications/radiation/systemic)		YES	
Exposed roots		YES	
Orthodontic appliances		YES	
Protective Factors			
Lives/work/school fluoridated community			YES
Fluoride toothpaste at least once daily			YES
Fluoride toothpaste at least 2x daily			YES
Fluoride mouthrinse (0.05% NaF) daily			YES
5,000 ppm F fluoride toothpaste daily			YES
Fluoride varnish in last 6 months			YES
Office F topical in last 6 months			YES
Chlorhexidine prescribed/used one week each of last 6 months			YES
Xylitol gum/lozenges 4x daily last 6 months			YES
Calcium and phosphate paste during last 6 months			YES
Adequate saliva flow (> 1 ml/min stimulated)			YES
**Bacteria/Saliva Test Results: MS: LB: Flow Rate: ml/min. Date:			

VISUALIZE CARIES BALANCE
 (Use circled indicators/factors above)
 (EXTREME RISK = HIGH RISK + SEVERE SALIVARY GLAND HYPOFUNCTION)
 CARIES RISK ASSESSMENT (CIRCLE): EXTREME HIGH MODERATE LOW

Doctor signature/#: _____ Date: _____



Case Approval Form

CASE APPROVAL FORM

Resident's name: _____

Resident's no.: _____

Date: _____ Case no.: _____

A.	Appropriate documentation	Fully Performed	Partially Performed	Not Performed
1.	Medical and dental history	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Chief complaint	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Dental charting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Extra-oral examination: Face, lymph nodes, TMJ, muscles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Intra-oral examination: Teeth, mouth opening, periodontium, mucosa, tongue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Clinical test for suspected teeth: thermal percussion, palpation, bite	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Preoperative orthopantomogram	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Preoperative 20 cm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Intra-oral pictures, 5 views before treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Mounted diagnostic casts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	Diagnostic wax-up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	Diagnosis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	Treatment plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Case Report Evaluation Form

CASE REPORT EVALUATION FORM										
Name:		Resident year:		Excellent (5)	Very good (4)	Average (3)	Below average (2)	Poor (1)	Poor (1)	Non-applicable (0)
Training center:		<input type="checkbox"/> R1	<input type="checkbox"/> R2							
		<input type="checkbox"/> R3	<input type="checkbox"/> R4							
Region:										
<input type="checkbox"/> Central	<input type="checkbox"/> Eastern	<input type="checkbox"/> Western								
POINTS OF EVALUATION				Excellent (5)	Very good (4)	Average (3)	Below average (2)	Poor (1)	Poor (1)	Non-applicable (0)
1	Abstract			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Clinical case documentation: – Appropriate documentation of critical informative data: patient gender, age, medical/dental history, chief complaint, medications prescribed, previous procedures, or any appliances constructed. – All critical diagnostic tests, examinations, or procedures have been recorded.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Appropriate treatment plan			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Successful in declaring the various treatment options (alternative treatment plans)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Quality of treatment rendered			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Mini-CEX Form

Trainee name		SCFSH #							
Residency level		Date							
Brief summary of case:									
CASE		NEW							
COMPLEXITY		LOW							
FOCUS		DATA GATHERING							
		DIAGNOSIS							
		FOLLOW-UP							
		MODERATE							
		THERAPY							
		COUNSELING							
SCORE FOR STAGE OF TRAINING									
Criteria	1			Satisfactory			Superior		
	1	2	3	4	5	6	7	8	9
Posture									
History-taking									
Physical									
Communication									
Critical judgment									
Humanistic									
Organization and									
Overall clinical care									
Suggestions for development:									
Evaluator's Name:									
Signature:									

DESCRIPTION OF CRITERIA	
Posture	Sitting posture on the chair/operative position and gaining access/positioning the patient
History-taking	Facilitates patient's narrative; uses appropriate questions to obtain accurate, adequate information effectively; responds to verbal and nonverbal cues appropriately
Physical examination skills	Follows an efficient, logical sequence; examinations are appropriate for clinical problems; provides patients with explanations; is sensitive to patients' comfort and modesty
Communication skills	Explores patients' perspectives; jargon-free speech; open and honest; empathetic; agreement on management plans and therapies with patients
Critical judgment	Forms appropriate diagnoses and suitable management plans; orders selectively and performs appropriately diagnostic studies; considers risks and benefits
Humanistic quality/professionalism	Shows respect, compassion, and empathy; establishes trust; attends to patient's comfort and needs; respects confidentiality; behaves in an ethical manner; is aware of legal frameworks and his or her own limitations
Organization and efficiency	Prioritizes; is timely and succinct; summarizes





CASE-BASED DISCUSSION EVALUATION FORM

Resident's Name:	Level: <input type="radio"/> R1 <input type="radio"/> R2 <input type="radio"/> R3
Training Center:	Region: <input type="radio"/> 1 st <input type="radio"/> 2 nd <input type="radio"/> 3 rd <input type="radio"/> 4 th <input type="radio"/> 5 th

	Parameter	Score		
		R1	R2/ R3	Given
1	Quality of Presentation <ul style="list-style-type: none"> Quality of slides (font type, no conflicting background, absence of errors in spelling, grammar or terminology) Organization in presentation delivery according to SBRD guidelines and templates Effective use of figures and/or tables if required High quality photographs and radiographs 	10	5	
2	Clinical Case Documentation <ul style="list-style-type: none"> Comprehensive case data gathering (patient age and gender, medical history, medications, social and behavioral considerations, dental background, chief complaint, previous procedures or constructed appliance) All critical diagnostic tests and records (physical examination, intraoral photographs, radiographs, dental and periodontal charting, study casts, occlusal and smile analyses) Detailed description of consistencies leading to a summary of problem list or situation/s; describes possible causes and contributing factors; includes other significant patient characteristics 	10	10	
3	Appropriate Treatment Planning, Prognosis, and Assessment Outcomes <ul style="list-style-type: none"> Entire treatment phases documentation is fulfilled, including clinical judgment, clinical reasoning, and clinical decision making Detailed prognosis and assessment of outcomes Inclusion of alternative treatment plans 	15	15	
4	Support Treatment Plan with Pertinent Literature <ul style="list-style-type: none"> Utilization of best available evidence to support clinical decision making 	15	10	
5	Quality of Caries Risk Assessment, Preventive Measures, and Maintenance of Standards of Care <ul style="list-style-type: none"> Inclusion of preventive measures according to patient's oral needs and conditions Clear description of patient's care including referrals, recall, and maintenance plans 	10	5	
6	Quality of Operative Management		15	
7	Quality of Pre-Prosthetic Management		5	
8	Quality of Prosthetic Management		5	
9	Knowledge and Cognition	10	10	
10	Professionalism and Presentation Skills <ul style="list-style-type: none"> Conduct and demeanor during presentation Response and attitude towards discussion and criticism Enthusiastic delivery, eye contact, and quality of communication skills 	10	5	
11	Time Management	10	5	
12	SIMPLE (3) MODERATE (6) COMPLEX (10)	10	10	
	TOTAL		100	

Comments:

Evaluator's Name:	Signature:	Date:
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DOPS Form

Saudi Commission For Health Specialties



Saudi Board for Restorative Dentistry



الهيئة السعودية للتخصصات الصحية
شهادة الإختصاص السعودية لإصلاح الأسنان

DIRECT OBSERVATION OF PROCEDURAL SKILLS (DOPS) FORM

Resident's Name:	Level: <input type="radio"/> R2 <input type="radio"/> R3
Training Center:	Region: <input type="radio"/> 1 st <input type="radio"/> 2 nd <input type="radio"/> 3 rd <input type="radio"/> 4 th <input type="radio"/> 5 th
Observable Procedure:	<input type="radio"/> Posterior Composite Buildup (<i>min. 1 missing cusp</i>) <input type="radio"/> Composite Layering Technique <input type="radio"/> Ceramic Onlay (<i>vital tooth</i>) <input type="radio"/> Porcelain Laminate Veneers (<i>2 adjacent teeth</i>)

	Domain	In-competent (0 - 5)	Borderline competent (6 - 7)	Competent (8 - 10)	Comments
1	Professionalism & Communication Skills <ul style="list-style-type: none"> Obtaining informed consent Displaying proper communication skill with the patient Displaying proper communication skill with the dental team Exhibiting professional personal attire and attitude 				
2	Pre-Procedure Preparation <ul style="list-style-type: none"> Preparation of relevant diagnostic aids Preparation of required materials and instruments Adherence to infection control protocol 				
3	Diagnosis & Treatment Planning * <ul style="list-style-type: none"> Explaining the rationale behind diagnosis Justifying the chosen treatment plan Explaining the indications of the chosen procedure Discussing alternative management options 				
4	Technical Skills * <ul style="list-style-type: none"> Competency of each clinical step of the procedure (<i>use guide on the back</i>) Explaining the procedure, outcomes, & possible complications 				
5	Post-Procedure Management <ul style="list-style-type: none"> Post-operative instructions Management of complications 				
Total		_____ out of 50			_____ out of 100

- Please only comment on overall ability if you have witnessed the whole procedure
- A "Competent" evaluation is mandatory for steps number 3 & 4 in order to pass the procedure
- An "Incompetent" evaluation in any step will lead to failure of the procedure
- A failed procedure must be redone

Evaluators' Comments:

Resident's Comments:

	Evaluator's Name	Signature		Procedure Start	Procedure Conclusion
1.			Date		
2.			Time		

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DIRECT OBSERVATION OF PROCEDURAL SKILLS (DOPS) FORM Guide

Posterior Composite Buildup (<i>min. 1 miss cusp</i>)				Composite Layering Technique			
Step	Incompetent 0	Borderline 1	Competent 2	Step	Incompetent 0	Borderline 1	Competent 2
Shade matching	●	○	○	Shade matching*	●	●	○
Preparation*	●	●	○	Preparation	●	○	○
Anatomic form*	●	●	○	Anatomic form*	●	●	○
Marginal integrity	●	○	○	Marginal integrity	●	○	○
Surface texture	●	○	○	Surface texture	●	○	○
Total	___ out of 10			Total	___ out of 10		



Ceramic Onlay (<i>vital tooth</i>)				Porcelain Laminate Veneers (<i>2 adjacent teeth</i>)			
Step	Incompetent 0	Borderline 1	Competent 2	Step	Incompetent 0	Borderline 1	Competent 2
Preparation*	●	●	○	Preparation*	●	●	○
Final impression	●	○	○	Final impression	●	○	○
Shape & shade	●	○	○	Shape & shade	●	○	○
Cementation	●	○	○	Cementation	●	○	○
Contact & Occlusion	●	○	○	Contact & Occlusion	●	○	○
Total	___ out of 10			Total	___ out of 10		

All steps with an asterisk indicate critical steps which the resident has to be competent in.

The following descriptors should be used as benchmark for a grading of Competencies for DOPS	
• Demonstrates indications, relevant anatomy, & details of procedure	• Clearly explains to the assessor the indication for the procedure, the relevant anatomy and essential steps of the procedure
• Obtains informed consent, after explaining procedure & complications	• Conveys information that is complete, relevant, clear, jargon-free and developmentally appropriate; is sensitive to patient's concerns, respects confidentiality, actively listens, answers questions correctly and checks patient's understanding before obtaining consent
• Prepares for procedure according to an agreed protocol	• Demonstrates clear pre-operative plan, identifies any special equipment required, makes all relevant safety checks, briefs other staff appropriately
• Administers effective anesthesia	• Selects appropriate local anesthetic agent; injects appropriate volume using the correct needle and technique
• Demonstrates good asepsis and safe use of instruments/sharps	• Supervises and follows high standards of aseptic operative technique; handles instruments and sharps safely
• Performs the technical aspects in line with the guidance notes	• Follows the protocol for the procedure, demonstrates good technique; uses instruments appropriately, handles tissue gently, controls bleeding appropriately
• Deals with any unexpected event or seeks help when appropriate	• Anticipates and responds calmly and appropriately, communicates clearly and consistently with patients and staff, uses assistants to best advantage, has awareness of own limitations
• Completes required documentation	• Makes clear and legible notes which enables effective care by other practitioners; adds complete progress notes to patient's file
• Issues clear post-procedure instructions to patient and/or staff	• Makes a post-procedure assessment; conveys relevant information orally and in writing; retains responsibility for the patient's ongoing care
• Communicates with patient & staff in a professional manner	• Demonstrates respect, and understanding of the patient's needs for comfort, respect and confidentiality; demonstrates an ethical approach, and awareness of any relevant legal frameworks
• Overall ability to perform whole procedure	• Ensures patient safety at all times; demonstrates good clinical knowledge, judgement and technique; makes appropriate use of equipment and resources.



Smile Analysis Form





SAUDI BOARD IN RESTORATIVE DENTISTRY

1/5

SBRD Smile Analysis Form

A-GENERAL INFORMATION

Examiner _____ Date ____/____/____

Patient _____ Age _____

PATIENT'S PHOTOGRAPH PATIENT'S PHOTOGRAPH PATIENT'S PHOTOGRAPH

esthetic self-evaluation _____

Patient's requests and expectations _____


Preferences White and aligned teeth Teeth with slight irregularities

Past records: Smile photo Study casts Yes No Radiographs Yes No

B -

Yes No


FACIAL ANALYSIS



Interpupillary line vs horizon
Parallel Slanted Rt Lt

Commissural line vs horizon
Parallel Slanted Rt Lt

Facial midline
Centered Deviated Rt Lt



Profile
 Normal
 Convex
 Concave

E-line
 Max mm Mand mm

Lips
 Thick
 Medium
 Thin

Notes _____

2/5

C- DENTOLABIAL ANALYSIS

TOOTH EXPOSURE AT REST

Indicate Max _____ mm
 Mand _____ mm

INCISAL CURVE vs LOWER LIP

Convex Flat Reverse

Contacting Not contacting Covering

RT _____ mm LT _____ mm

SMILE LINE

Average Low High

High Gingival exposure
RT _____ mm LT _____ mm

SMILE WIDTH (no. of teeth visible)

6-8 10 12-14

LABIAL CORRIDOR

Normal Wide Absent

Rt _____ mm Lt _____ mm

UPPER INTERINCISAL LINE vs MIDLINE

Coincident Deviated Rt _____ mm Deviated Lt _____ mm

MIDLINE - CANTING TO RIGHT OR LEFT

Normal To Right To Left

OCCUSAL PLANE vs COMMISSURAL LINE/HORIZON

Parallel Slanted Rt _____ mm Slanted Lt _____ mm

Notes _____

D - PHONETIC ANALYSIS

	<p>"M" sound Rest - position Show of teeth in the space between lips visible Max.mm Mand.mm</p>		<p>"E" sound - Maximum show of teeth Interlabial space occupied by maxillary teeth <input type="checkbox"/> <50%% <input type="checkbox"/> >60%%</p>
	<p>"F & V" sounds - Max. Incisor edge position in relation to lower lip <input type="checkbox"/> At wet/dry border <input type="checkbox"/> In front of wet/dry border <input type="checkbox"/> Behind wet/dry border</p>		<p>"S" sound - Space between maxillary and mandibular incisors <input type="checkbox"/> Normal <input type="checkbox"/> LSP <input type="checkbox"/> S-Sound Deficiency</p>

E - TOOTH ANALYSIS

Table of esthetic changes (natural and/or iatrogenic) that have occurred over the years, by tooth number

18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38

INDICATE: O = Restoration, X = Missing, A = Abraded, B = Dyschromic, E = Extruded, F = Fractured, R = Rotated

MAXILLARY vs MANDIBULAR INTERINCISAL LINE

	<input type="checkbox"/> Coincident		<input type="checkbox"/> Deviated Rtmm		<input type="checkbox"/> Deviated Ltmm
--	-------------------------------------	--	--	--	--

TOOTH TYPE

<input type="checkbox"/> Ovoid	<input type="checkbox"/> Tapering	<input type="checkbox"/> Square
--------------------------------	-----------------------------------	---------------------------------

TEXTURE

Macro <input type="checkbox"/> No	<input type="checkbox"/> Slight	<input type="checkbox"/> Pronounced
Micro <input type="checkbox"/> No	<input type="checkbox"/> Slight	<input type="checkbox"/> Pronounced

MAXILLARY CENTRAL INCISORS: SHAPE, CONTOUR, AND PROPORTION

WN ratio 11%	21%	Profile 11 <input type="checkbox"/> Normal	21 <input type="checkbox"/> Buccal <input type="checkbox"/> Lingual

OCCUSAL RELATIONSHIP

Dental Class <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III	Overbitemm	Overjetmm	Interarch relationship <input type="checkbox"/> MIP <input type="checkbox"/> CO-CR	Incisal guidance <input type="checkbox"/> Yes <input type="checkbox"/> No	Canine guidance Rt <input type="checkbox"/> Yes <input type="checkbox"/> No	Lt <input type="checkbox"/> Yes <input type="checkbox"/> No
--	------------------	-----------------	--	---	---	---

<p>TOOTH ANALYSIS</p> <p>CONTOUR <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal</p> <p>PROPORTION <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal</p> <p>INTERINCISAL ANGLES <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal</p> <p>TOOTH AXES <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal</p> <p>TOOTH ARRANGEMENT <input type="checkbox"/> Regular <input type="checkbox"/> Crowded <input type="checkbox"/> Diastemata</p>	 <p>MARK ANY IRREGULARITIES ON DRAWING</p>	<p>GINGIVAL ANALYSIS</p> <p>GINGIVAL MARGINS <input type="checkbox"/> Symmetric <input type="checkbox"/> Asymmetric</p> <p>ZENITHS <input type="checkbox"/> Regular <input type="checkbox"/> Irregular</p> <p>PAPILLAE <input type="checkbox"/> Present <input type="checkbox"/> Absent</p> <p>BIOTYPE <input type="checkbox"/> Thick <input type="checkbox"/> Thin</p> <p>ALTERATIONS <input type="checkbox"/> Gingival inflammation <input type="checkbox"/> Hypertrophy <input type="checkbox"/> Recession</p> <p>EDENTULOUS RIDGES <input type="checkbox"/> Normal <input type="checkbox"/> Deformed</p>
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Notes

<p>TOOTH ANALYSIS</p> <p>CONTOUR <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal</p> <p>PROPORTION <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal</p> <p>TOOTH ARRANGEMENT <input type="checkbox"/> Regular <input type="checkbox"/> Crowded <input type="checkbox"/> Diastemata</p> <p>TOOTH AXES <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal</p> <p>INCISAL EDGE <input type="checkbox"/> Regular <input type="checkbox"/> Irregular</p>	 <p>MARK ANY IRREGULARITIES ON DRAWING</p>	<p>GINGIVAL ANALYSIS</p> <p>GINGIVAL MARGINS <input type="checkbox"/> Symmetric <input type="checkbox"/> Asymmetric</p> <p>PAPILLAE <input type="checkbox"/> Present <input type="checkbox"/> Absent</p> <p>BIOTYPE <input type="checkbox"/> Thick <input type="checkbox"/> Thin</p> <p>ALTERATIONS <input type="checkbox"/> Gingival inflammation <input type="checkbox"/> Hypertrophy <input type="checkbox"/> Recession</p> <p>EDENTULOUS RIDGES <input type="checkbox"/> Normal <input type="checkbox"/> Deformed</p>
--	---	--

Notes

■ THIS SECTION FOR CASES REQUIRING MULTIDISCIPLINARY APPROACH

F - OCCLUSION/ORTHODONTIC EVALUATION

UFH/LFH

- WNL
- Excess
- Deficient

ABNORMAL FUNCTIONS

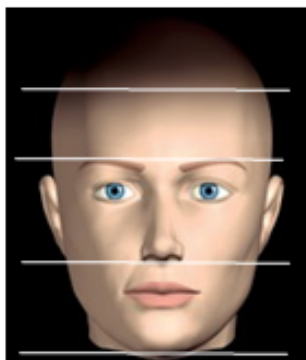
- Digit sucking e.g. thumb
- Object biting/sucking
- Lip sucking/biting
- Mouth breathing
- Tongue thrust swallow
- Grinding/Bruism
- Clenching Others.....

OVERBITE

- WNL (0-30%)
- Moderate (31-69%)
- Severe (70-100%)
- Anterior Open Bite.....mm
 - Dental
 - Skeletal

OVERJET

- WNL (1-2mm)
- Moderate (3-5mm)
- Severe (> 5mm)



MAXILLARY

- Crowding
- Spacing
- Anterior Crossbite
 - Dental
 - Skeletal
- Posterior Crossbite R or L
 - Skeletal
 - Dental

MANDIBULAR

- Crowding
- Spacing
- Anterior Crossbite
 - Dental
 - Skeletal
- Posterior Crossbite R or L
 - Skeletal
 - Dental
 - Functional shift

Classification of Occlusion/Malocclusion

- Normal Occlusion
- Class I Malocclusion
- Class II Malocclusion
 - Division 1
 - Division 2
- Class III Malocclusion

1. Complete Occlusion



CO-CR

Interferences & where:

2. Protrusive Occlusion



Front Contacts/Incisil edge

Interferences & where:

3. Right Working



R Contacts L Contacts

Interferences & where:

4. Left Working



R Contacts L Contacts

Interferences & where:

Notes



ITER

	n/a	Clear Fall (1)	Borderline (2)	Clear Pass (3)	Exceed Expectations (4)
* A. MEDICAL EXPERT:					
History and Physical Examination:					
1. Comprehensive, accurate & concise with all relevant details	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Diagnostic Tests:					
2. Used in a cost-effective manner and understands limitation & predictive value.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Clinical Decision:					
3. Able to formulate appropriate differential diagnosis.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* 4. Able to analyze, integrate, and formulate effective management strategies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medical Knowledge:					
5. Broad Clinical and Basic knowledge of a wide variety of dental problems and develops a plan of dental therapeutic procedures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Emergency Management:					
6. Able to identify and respond appropriately urgent cases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Evidence-based Practice/Critical Appraisal Skills:					
7. Aware of the role of evidence in clinical decision-making.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* 8. Able to apply relevant information in problem-solving and management procedures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* 9. Demonstrate knowledge of medications used (including Anesthetic Agents), mechanism of action, clinically relevant pharmacokinetics, indications, contradictions and adverse effects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Procedure skills:					
10. Clinical time management for procedure performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* 11. Perform diagnostic & therapeutic procedures, understands indications, limitations & complications.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* B. COMMUNICATOR					
12. Communicates effectively with patients, their families, and HCPs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* 13. Able to maintain clear, accurate & appropriate records	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* 14. Written orders, referrals and progress notes well organize & legible.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* C. COLLABORATION					
15. Works effectively in a team environment with attending juniors and nursing staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* D. Manager					
16. Appropriate & efficient use of dental care resources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* E. SCHOLAR:					
17. Attends and contributes to treatment plan sessions, seminars, and other learning events.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Treatment Plan Phases

<u>PHASE I</u>	<u>PHASE II</u>	<u>PHASE III</u>	<u>PHASE IV</u>	<u>PHASE V</u>	<u>PHASE VI</u>
PREVENTIVE PHASE	OPERATIVE PHASE	ENDODONTIC PHASE	PRE-PROSTHODONTIC SURGICAL PHASE	PROSTHODONTIC PHASE	RECALL AND MAINTENANCE
<p>This consists of two parts: emergency management and stabilization</p> <p>Emergency: To manage any dental emergency to control a patient's symptoms</p> <p>1. Medical history 2. Acute infection management, acute pain management, esthetic emergencies</p> <p>Stabilization: Objectives – to control the disease process, educate the patient, and establish a</p>	<p>Objectives – eliminate caries, restore function, restore esthetics, maintain healthy periodontium, and restore the dentition to a maintainable level</p> <p>A. Establish a definite operative treatment plan B. Restore all carious teeth with permanent restorations C. Bleaching performed prior to placement of definitive restorations D. Assessment and preparation of teeth.</p>	<p>Objectives – eliminate infection, eliminate secondary periodontal involvement, reassessment of restorability of teeth, assessment of appropriate treatment modality per case, and outcome.</p> <p>A. Establish a definitive endodontic treatment plan B. Management of vital pulp (prevention of pulp damage, reversible or irreversible) C. Management of traumatic injuries</p>	<p>A. Cases that require extensive prosthodontic management- alteration of vertical dimension/plane of occlusion or esthetic considerations require additional pre-treatment steps:</p> <p>- Final evaluation of occlusion, mounted diagnostic casts - Occlusal analysis - Diagnostic wax-up - Fabrication</p>	<p>A. Fabrication and delivery of definitive prosthesis :</p> <ul style="list-style-type: none"> - Crowns/ fixed partial dentures - Implant-supported prosthesis - Occlusal appliance <p>B. Fabrication of restorations postponed to Phase V such as porcelain veneers or onlays constructed to correct anterior guidance, or alter the occlusal plane</p>	<p>Establish recall and maintenance plan according to the Caries Risk Assessment and complexity of treatment received</p>



<u>PHASE I</u>	<u>PHASE II</u>	<u>PHASE III</u>	<u>PHASE IV</u>	<u>PHASE V</u>	<u>PHASE VI</u>
PREVENTIVE PHASE	OPERATIVE PHASE	ENDODONTIC PHASE	PRE-PROSTHODONTIC SURGICAL PHASE	PROSTHODONTIC PHASE	RECALL AND MAINTENANCE
<p>patient-doctor relationship</p> <p>A. Diagnosis and risk assessment</p> <p>1. Diagnosis</p> <ul style="list-style-type: none"> - Medical history - Dental history - Diet history - Radiographic evaluation - Soft/hard tissue evaluation - Dental consultations (periodontic, orthodontic, surgical) - Other necessary diagnostics (pulp vitality tests, cephalometric analysis, smile analysis, 			<p>of provisional s, templates, and surgical stents</p> <p>B. Restoration of endodontically treated teeth, post, and cores</p>		