Faculty of Dentistry

King AbdulAziz University

Doctor of Philosophy in Pediatric Dentistry

Program Catalog

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بسم الله الرحمن الرحيم

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INTRODUCTION

The Department of Pediatric Dentistry, Faculty of Dentistry, King Abdulaziz University at Jeddah, Saudi Arabia offers a Doctor of Philosophy (Ph.D.) in Pediatric Dentistry. The program was first established and approved in 27/07/1432 AH (29/06/2011G).

The PhD in Pediatric Dentistry is a 3-year program that includes clinical training and research in the field of Pediatric Dentistry. The program integrates basic science and clinical Pediatric Dentistry in a comprehensive curriculum, designed to develop clinically proficient consultants who possess a scholarly insight into Pediatric Dentistry–as it relates to patient care. On completion of the program, a Doctor of Philosophy degree is attained.

Head of Pediatric Dentistry Department

Dr. Nada Bamashmous

VISION, MISSION AND GOALS

VISION:

Leadership and excellence in pediatric dentistry nationally and internationally.

MISSION:

Achieve excellence in teaching and learning, scientific research, leadership and entrepreneurship, and provide distinguished patient care and community service in the field of Pediatric Dentistry.

PROGRAM GOALS:

The PhD program in Pediatric Dentistry is developed to provide postgraduate students with skill and knowledge needed to perform the following goals:

1. Excellence in Education
   To provide advanced education in Pediatric Dentistry that will focus on enhancing the necessary competencies and skills required to provide high-quality care to children and adolescents including those with special health care needs.

2. Excellence in Scientific Research, Innovation and Entrepreneurship
   To design, conduct and publish innovative research in Pediatric Dentistry that contributes to the advancement of knowledge in the field, fostering a spirit of innovation and entrepreneurship among students.

3. Distinguished Patient Care and Community Service
   - To provide advanced care to children and adolescents including those with special health care needs in the field of Pediatric Dentistry.
   - To actively engage in community service activities and develop their skills in providing dental care to diverse populations.

4. Effective Leadership
   To cultivate leadership skills in all aspects of pediatric dentistry, enabling students to lead, innovate, and excel in clinical practice, research, education, and community service.

ADMISSION REQUIREMENTS

The Deanship of Graduate Studies Council, based on the proposal of the Department Council that is approved by the Faculty Council, decides the number of students who will be admitted for the next academic year.

The Ph.D. (Pediatric Dentistry) Program is one of the general programs of KAU postgraduate programs which is free of charge.

Applications for graduate studies at KAU are 100% electronic through an admission system to be accessed through the website of the Deanship of Graduate Studies.

General Admission Requirements:

The Eligibility Requirements	The applicant must be Saudi, or on an official scholarship for graduate studies if of non-Saudi origin. The applicant must have a master's degree from a Saudi university or from another recognized university. The applicant must be of good conduct and medically fit. Applicants must submit two scientific recommendations from professors/teachers who have taught him previously. An applicant must have the approval of the employer for the study if he is an employee. The applicant must achieve the required score in the General Aptitude Test for University Graduates (65) as a minimum for academic programs.
The Selection Mechanism	Admissions are evaluated according to the following: General Aptitude Test for undergraduates: 20%. Master's GPA: 30%. Written or practical exam by the academic department: 30%. The applicant's research potential: 20%, assessed by the academic department. The objective of the study, submitted in writing by the applicant (Statement of Purpose). The applicant's research contributions (published research, participation in academic research events, or research contributions in the program's specialization). Anyone who scores at least 75% of the total criteria above will be accepted according to the proposed number of admissions. The academic department council may accept anyone who scores less than this score.

Admission process	Qualified applicants are ranked based on weighted selection criteria, including GPA, standardized test scores, and relevant program-specific requirements. The admission department at KAU reviews the applications and ranks the candidate list according to their cumulative scores, ensuring fair and transparent selection.
Postponement of the admission	At KAU, students admitted to the Ph.D. (Pediatric Dentistry) Program have the option to postpone their studies for up to one academic year before registering for courses. This postponement request must be submitted and approved by the KAU Deanship of Graduate Studies, in accordance with university regulations. The postponement policy allows students to delay their acceptance due to personal, medical, or professional reasons while securing their admission status. However, failure to resume studies within the approved period may result in the cancellation of admission, requiring the student to reapply for future enrollment. This process ensures flexibility while maintaining academic planning and program capacity.

Program Specific Admission Requirements:

Applicants must fulfill the general requirements requested by KAU Deanship of Graduate Studies. In addition, for admittance in the Doctor of Philosophy (PhD) in Pediatric Dentistry program, the applicants should fulfill the following specific requirements:

GPA	Minimum grade of "Very good"
Qualifications	The applicant must have a master's degree from a Saudi university or from another recognized university.
Admission test at the Department	Structured written and Oral tests are required and to achieve a minimum passing score of 70
General Admission Test	Minimum 65
English Language Test	IELTS: 6 and above TOEFL: 95 or equivalent
Others	Employee approval for full time study

REGULATORY ASPECTS OF THE STUDY PLAN

All regularity aspects of the study plan follow the Unified Rules and Regulations for Postgraduate Studies that is regulated by KAU Deanship for Graduate Studies through its executive rules, policies, and procedures. This includes:

- Program & curriculum establishment & development.
- Admission policies and procedures.
- Academic policies and procedures.
- Financial policies and procedures.
- Electronic procedures for postgraduate studies transactions.

Program specific articles definitions

Academic Year: A full academic year is not less than thirty weeks during which the syllabus is taught, and not including registration, nor final examinations periods.

Study Level: Which indicates the study level and is awarded for a whole academic year.

The Curriculum: A course of study which follows a certain standard within the approved study plan. Each course should have a code, a name and a detailed description of its times which differentiate it, in respect of standard and content, from other courses. Some courses may have requisites, pre-requisites or co-requisites simultaneously.

Unit of Study:

- A weekly theoretical lecture which is not less than fifty minutes for half a year time,
- A scientific lesson, a clinical lesson or field lesson, which is not less than a hundred minutes for half a year time.

Academic Warning: The notification, which is addressed to the student when he/she has only one chance left for success before rolling his entry.

Annual Grade: Grade awarded for work which shows the achievements of the student throughout the academic year including examinations, research, learning activities related to the curriculum.

Final Examinations: An examination in the curriculum held once at the end of semester or year.

Final Grade: The total annual grade added to the final examination grade in each course.

Evaluation: The description of the percentage or the alphabetical symbol for the final degree achieved by the student in each course.

General Evaluation: Measurement of learning achievements for the student through his university study.

Policy of Study

1. Study in the faculty of dentistry follows the full academic year system.
2. The prescribed period for obtaining a Doctor of Philosophy (PhD) in Pediatric Dentistry degree is no less than six semesters and not more than eight chapters including a thesis defense.
3. The statutory period is calculated from the beginning of registration in the methodological curriculum plan in which the applicant is accepted.
4. The curriculum is distributed over three levels. Every level has its number of units of study according to study plans.
5. The student does not graduate until after completing the academic degree requirements and with a cumulative GPA not less than very good (3.75).

The policies and procedure for this regulation follows the article (18) and its executive rules of the Unified Regulations for Graduate Studies and its Implementing Rules.

Postponement of Study

1. A new student cannot postpone studies.
2. The procedure is for a student who has passed one or more semesters.
3. The application is to be made according to the academic calendar.
4. The total period of postponement shall not exceed four semesters.
5. It is not possible to postpone for more than two consecutive semesters, provided that the procedure for each semester is conducted through a separate application.
6. The postponement period is not counted within the maximum period for obtaining the degree.
7. There must be convincing reasons.
8. It is not possible to postpone during additional opportunities.
9. The application is to be electronically submitted from the student's account through the Application System of Graduate Studies.
10. Submitting the application does not mean accepting it, and the student must follow up the application until it is approved.

The policies and procedure for this regulation follows the article (22) and its executive rules of the Unified Regulations for Graduate Studies and its Implementing Rules.

Withdrawal from Study

1. The procedure is for those who have a study schedule.
2. The procedure is calculated within the number of times of postponements.
3. It is not possible to postpone for more than two consecutive semesters, provided that the procedure for each semester is conducted through a separate application
4. It is not possible to postpone during additional opportunities.
5. The application is to be electronically submitted through the Graduate Application System.
6. Submitting the transaction does not mean accepting it, and the student must follow up until it is approved by the Deanship.

The policies and procedure for this regulation follows the article (31) and its executive rules of the Unified Regulations for Graduate Studies and its Implementing Rules.

Transfer Policy:

From Faculty to Another or from a Department to Another within the Same Faculty

1. Passing (6) academic hours.
2. The average should not be less than very good (3.75).
3. Students must meet the admission requirements for the program to be transferred to.
4. The transfer is for one time, whether inside or outside the faculty
5. Submission of the application is done according to the Academic Calendar.
6. The academic department transferred to can carry out the equivalency of some courses if it deemed them in accordance with the plan of the program.
7. The academic department to be transferred to has the right to approve supplementary courses for the student before initiating the studies of the program plan.
8. Application must be electronically submitted from the student's account through the Application System of Graduate Studies.

The policies and procedure for this regulation follows the article (31) and its executive rules of the Unified Regulations for Graduate Studies and its Implementing Rules.

Extension of Study Period

1. There should be an approved application to acknowledge the title of the thesis and to appoint a supervisor.
2. The average should not be less than very good (3.75).
3. The Thesis Supervisor's Evaluation average shall not be less than very good (3.75).
4. Approval of the academic department of the faculty.
5. The number of additional opportunities shall not exceed two semesters.
6. The application is initiated in the last semester of the student's regular term.
7. The additional opportunity is for students of thesis programs only.
8. The application is to be electronically submitted from the student's account through the Application System for Graduate studies.

The policies and procedure for this regulation follows the article (29) and its executive rules of the Unified Regulations for Graduate Studies and its Implementing Rules.

Thesis Registration, Supervision and Examination

1. The student has the right to register his/her thesis title and get an appointed supervisor after passing 50% of the program plan and before finishing the plan.
2. The average GPA should not be less than very good (3.75).
3. The research plan should be approved by the academic department.
4. The selection of the supervisor should be in accordance with the Unified Regulation for Graduate Studies.
5. Thesis examination requires publication of a paper for the master's degree.
6. The thesis must be examined and approved by the Academic Council before establishing and forming the Viva Committee.
7. The members of the Viva committee should be in accordance with the Rules of the Unified Regulation for Graduate studies.
8. The Viva must be conducted after submitting the completed thesis to the academic department in no more than one semester from the application to thesis examination.
9. All thesis registration and examination procedures should be done electronically.

The policies and procedure for this regulation follows the article (42-48, 50, 53-58) and its executive rules of the Unified Regulations for Graduate Studies and its Implementing

Degree Award

The PhD degree in the specialty is awarded after completion of all the followings:

1. Successful completion of all study plans mandated requirements and examinations with an average not less than very good (3.75).
2. Passing the thesis viva examination.

The policies and procedure for this regulation follows the articles and its executive rules of the Unified Regulations for Graduate Studies and its Implementing Rules.

PROGRAM STUDY PLAN

1. Program Description

Name of Academic Degree	Ph.D. (Pediatric Dentistry)
Qualification Level	Doctor of Philosophy degree by courses and thesis
Department	Pediatric Dentistry
College	Faculty of Dentistry
Institution	King Abdulaziz University

2. Study Plan Framework

Study Plan Framework		No. of Courses	Credit Hours
Department Course	Required	**9**	**17**
	Electives	**3**	**3**
Faculty Courses	Required		
	Electives	**3**	**4**
Courses From Other Faculties	Required	**4**	**7**
	Electives	**3**	**5**
Thesis		**1**	**12**
Total		**23**	**48**

3. Program Courses:

Level	Course Code	Course Title	Required or Elective	Credit Hours
1st Y	MLTD 901	Genetic Diseases (M)	Required	1
	EDTD 906	Advanced Medical Education and Clinical Teaching Skill (M)	Required	2
	BCHD 910	Cell Molecular Biology (M)	Required	2
	ANSD 930	General Anesthesia for children / Clinic (M)	Required	2
	PDS 932	Advanced Pediatric Dentistry articles 1 (M)	Required	2
	PDS 933	Advanced Clinical Pediatric Dentistry (M)	Required	2
	PDS 935	Advance Conscious Sedation (Clinics & Lecture) (M)	Required	2
	PDS 936	Advanced Clinical Pediatric Dentistry 2 (M)	Required	2

Level	Course Code	Course Title	Required or Elective	Credit Hours
	PDS 938	Advanced Pediatric Dentistry Articles 2 (M)	Required	2
2nd Y	PDS 937	Clinics for Children with Special Needs (M)	Required	1
	PDS 940	Multidisciplinary Clinic (M)	Required	2
	PDS 941	Advanced Clinical Pediatric Dentistry 3 (M)	Required	2
	PDS 939	Advanced Hospital Dentistry (M)	Required	2
	PDS 999	Thesis (M)	Required	12
3rd Y	PDS 999	Thesis (M)	Required	12

Elective Courses	PDS 908	Dental Forensic (E)	Elective	1
	OBCS 911	Diet and Nutrition (E)	Elective	1
	PDS 912	Craniofacial Anomalies (E)	Elective	1
	OBCS 913	Diagnostic Evaluation (E)	Elective	1
	BCHD 904	clinical laboratory medicine (E)	Elective	2
	MLTD 909	Genetic Laboratory (E)	Elective	2
	OBCS 900	Advanced Oral Biology (E)	Elective	2
	PDS 914	Practice Management (E)	Elective	1
	BCHD 915	Molecular Genetics (E)	Elective	1

COURSES DISTRIBUTION BY FACULTY / DEPARTMENT

1. Department Courses:

Department / Division	Course Code	Course Title	Required or Elective	Credit Hours
Pediatric Dentistry Department	PDS 932	Advanced Pediatric Dentistry articles 1 (M)	Required	2
	PDS 933	Advanced Clinical Pediatric Dentistry (M)	Required	2
	PDS 935	Advance Conscious Sedation (Clinics & Lecture) (M)	Required	2
	PDS 936	Advanced Clinical Pediatric Dentistry 2 (M)	Required	2
	PDS 938	Advanced Pediatric Dentistry Articles 2 (M)	Required	2
	PDS 937	Clinics for Children with Special Needs (M)	Required	1
	PDS 940	Multidisciplinary Clinic (M)	Required	2
	PDS 941	Advanced Clinical Pediatric Dentistry 3 (M)	Required	2
	PDS 939	Advanced Hospital Dentistry (M)	Required	2
	PDS 999	Thesis (M)	Required	12
	PDS 908	Dental Forensic (E)	Elective	1
	PDS 912	Craniofacial Anomalies (E)	Elective	1
	PDS 914	Practice Management (E)	Elective	1
Total				**32**

2. Faculty Courses:

Department / Division	Course Code	Course Title	Required or Elective	Credit Hours
Oral Biology	OBCS 911	Diet and Nutrition (E)	Elective	1
Oral Biology	OBCS 900	Advanced Oral Biology (E)	Elective	2
Total				3

Courses From Other Faculties:

Faculty / Department	Course Code	Course Title	Required or Elective	Credit Hours
Faculty of Medicine /	MLTD 901	Genetic Diseases (M)	Required	1
Faculty of Applied Medical Sciences	EDTD 906	Advanced Medical Education and Clinical Teaching Skill (M)	Required	2
Faculty of Medicine / Department of Biochemistry	BCHD 910	Cell Molecular Biology (M	Required	2
Faculty of Medicine / Department of Anesthesia	ANSD 930	General Anesthesia for children / Clinic (M)	Required	2
Faculty of Medicine / Department of	OBCS 913	Diagnostic Evaluation (E)	Elective	1
Faculty of Medicine / Department of	BCHD 904	Clinical Laboratory Medicine (E)	Elective	2
Faculty of Medicine / Department of	MLTD 909	Genetic Laboratory (E)	Elective	2
Faculty of Medicine / Department of	BCHD 915	Molecular Genetics (E)	Elective	1
Total				13

COURSES DISTRIBUTION BY ACADEMIC LEVEL (YEAR)

LEVEL 1: 1st ACADEMIC YEAR COURSES

Level	Course Code	Course Title	Required or Elective	Credit Hours	Type Didactic Clinical Practical	Contact Hours
1st Year	MLTD 901	Genetic Diseases (M)	Required	1	D+P	1+2
	EDTD 906	Advanced Medical Education and Clinical Teaching Skill (M)	Required	2	D+P	1+2
	BCHD 910	Cell Molecular Biology (M)	Required	2	D	1
	ANSD 930	General Anesthesia for children / Clinic (M)	Required	2	D	2
	PDS 932	Advanced Pediatri Dentistry articles (M)	Required	2	D+C	1+2
	PDS 933	Advanced Clinical Pediatric Dentistry (M)	Required	2	D	1
	PDS 935	Advance Consciou Sedation (Clinics & Lecture) (M)	Required	2	D	1
	PDS 936	Advanced Clinical Pediatric Dentistry 2 (M)	Required	2	D	2
	PDS 938	Advanced Pediatri Dentistry Articles (M)	Required	2	D+C	1+2
	Total Contact Hours		17			

LEVEL 2: 2nd ACADEMIC YEAR COURSES

Level	Course Code	Course Title	Required or Elective	Credit Hours	Type Didactic Clinical Practical	Contact Hours
2nd Year	PDS 937	Clinics for Children with Special Needs (M)	Required	1	D	1
	PDS 940	Multidisciplinary Clinic (M)	Required	2	D	1
	PDS 941	Advanced Clinical Pediatric Dentistry 3 (M)	Required	2	P	2
	PDS 939	Advanced Hospital Dentistry (M)	Required	2	C	2
	PDS 999	Thesis (M)	Required	12	D	12
	Total Contact Hours		7			

LEVEL 3: 3rd ACADEMIC YEAR COURSES

Level	Course Code	Course Title	Required or Elective	Credit Hours	Type Didactic Clinical Practical	Contact Hours
3rd Year	PDS 999	Thesis (M)	Required	12	Required	12
	Total Contact Hours		12			

COURSES DESCRIPTION

DEPARTMENT COURSES

Course Code	Course Title	Credits	Prerequisite
PDS 932	Advanced Pediatric Dentistry articles 1	**2**	

Course Objective:

By the end of this course, the student should be able to:

1. Recognize different preventive measures in the current literature.
2. Describe the scope of different management techniques for pulp therapy and traumatic injuries.
3. Discuss data obtained in Saudi Arabia related to different topics.
4. Compare different types of research designs and guidelines for reporting them.
5. Critically appraise scientific articles and formulate literature reviews.
6. Utilize software applications to search electronic databases and incorporate the latest findings.
7. Present research findings and literature reviews effectively to a professional audience.
8. Write and publish a literature review paper.
9. Develop skills in presenting research results in public.

At the end of this course the postgraduate student should be able to:

Knowledge:

1. Recognize different preventive measures and current updates in dental treatment for children and adolescents based on evidence-based dentistry.
2. Describe the scope of different management techniques for pulp treatment and traumatic injuries.
3. Discuss updated research data obtained in Saudi Arabia related to different topics.

Skills:

1. Compare different types of research designs and guidelines for reporting them.
2. Critically appraise scientific articles and formulate literature reviews.
3. Utilize software applications in searching and presenting electronic database findings and incorporate the latest findings.
4. Write and publish a literature review paper.

Values:

1. Apply ethical standards in searching and preparing the literature.
2. Adopt a lifelong learning philosophy and pursue professional development.

Topics:

1. A Randomized Controlled Trial of a 10 Percent CPP-ACP
2. Association between the number of early carious lesions and diet
3. Association between Childhood Obesity and Dental Caries
4. Adhesive systems for restoring primary teeth: a systematic review and meta-analysis of in vitro studies
5. Breast and Bottle Feeding as Risk Factors for Dental Caries: A Systematic Review and Meta-Analysis.
6. An assessment of the quality characteristics of randomized control trials published in dental journals.
7. Assessment of the quality of reporting randomized clinical trials in pediatric dental journals.
8. A Systematic Review of Pulp Revascularization Using a Triple Antibiotic Paste

9. Horizontal Transmission of Streptococcus mutans in Children and its Association with Dental Caries: A Systematic Review and Meta-Analysis
10. Guidelines for writing a review article
11. Types of research and study design
12. Guidelines for reporting different types of research: CONSORT, STROBE, PRISMA, QUOROM, STARD, SAMPL, CARE, AGREE, GRADE …..etc.
13. Approaches to manage non-cavitated caries
14. Selected Topic Research
    - Evidence-based Use of Fluoride
    - Evidence-based Use of pits and fissures sealant
    - Evidence-based Use of xylitol
15. Amelogenesis and dentinogenesis imperfecta and their management
16. Pulp therapy in primary and young permanent teeth
17. Silver Diamine fluoride
18. Management of traumatic dental injuries in the primary and young permanent dentition
19. Factors affecting early childhood caries
20. Management of deep carious lesions and stepwise excavation of caries
21. Mineral trioxide aggregate in pediatric dentistry.
22. HALL technique
23. Zirconia Crown
24. Dental materials in pediatric dentistry

Teaching Methods:

1. Seminars/Scientific article discussion
2. In class activity with discussion and feedback (Article review and critique)

Evaluation Methods:

Assessment Task:

1. Oral presentations and Critiques: 60%
2. Oral Exam - Final Oral presentation exam: 10%
3. Assignment - Final literature review: 30%

Total 100%

Course Code	Course Title	Credits	Prerequisite
PDS 933	Advanced Clinical Pediatric Dentistry (1)	**2**	

Course Objective:

This course aims to deepen the knowledge and sharpen the evidence – based clinical skills, increase the confidence, and improve the time management of postgraduate students through exposure to various clinical cases & scenarios with the encouragement to discuss the treatment plans and treating more complex cases.

At the end of this course the postgraduate student should be able to:

Knowledge:

1. Recognize the causes of oral conditions for each patient to create personalized prevention plans and its effect of the child wellbeing.
2. Develop awareness on building clinical decisions based on research evidence.

Skills:

1. Conduct a thorough comprehensive exam and treatment plan based on patient requirements, considering the necessity of each diagnostic record.
2. Apply evidence-based knowledge in clinical decision making while treating advanced and complex cases.
3. Communicate effectively with all dental team members, patients, other dental disciplines, referral and documentation.
4. Demonstrate advanced proficiency in the application and facilitation of soft skills through the structured presentation of clinical cases, engagement in clinical teaching of undergraduate students, and active participation in community-based professional activities.

Values

1. Demonstrate ethical and professional code of conduct.
2. Encourage self-learning by using evidence-based dental practices to enhance critical thinking, and clinical decision-making based on current scientific evidence and best practices.
3. Demonstrate Leadership skills, teamwork, and their ability to transfer the knowledge in a community work.

Topics:

1. Case Based Learning (CBD).
2. Clinical session.

Teaching Methods

1. Interactive discussion in laboratory/clinical sessions with feedback.
2. Clinical demonstration & practice with feedback.

Evaluation Methods:

Continuous Assessment

1. Case-based Discussion using rubric (CBD): 5%
2. Case complete evaluation via rubric: 10%
3. Submission of required documents via rubric: 10%
4. Supervision of Undergraduate Supervision via rubric: 2%
5. Participation in a community Service via rubric: 3%
6. ER coverage via rubric: 5%

Final Assessment:

Semi Annual Evaluation:

1. Clinical Assessment via Semi-Annual Postgraduate Assessment evaluation form (SAPA): 20%
2. Clinical Performance Evaluation:
    a. Via electronic file system: 20%
    b. Via domains: 20%
3. Self assessment: 5%

Course Code	Course Title	Credits	Prerequisite
PDS 935	Advanced Conscious Sedation	**2**	

Course Objective:

The main purpose of the basic sedation course is to provide the students with the knowledge and skills necessary to provide sedation safely. Identify patients at high risk that contraindicate sedation. And to be able to manage patients in case complications happen.

At the end of this course the postgraduate student should be able to:

Knowledge:

1. Describe American Society of Anesthesia classification, pre-operative assessment, history taking and possible adverse events that could occur with sedation
2. Describe different sedation medications, routes of administration, indications, contraindications, and its reversal medications.

Skills:

1. Assess pediatric patients' pre-sedation based on the American Society of Anesthesia classification and monitor patients during and post sedation.
2. Formulate pharmacological behavioral treatment plan in visits.
3. Perform professionally sedation levels through appropriate monitoring, utilizing basic life support steps on a high-fidelity mannequin, evaluating the scene and staff preparedness for emergencies, and finally, managing potential complications arising from variable sedation with the proper medications and equipment.
4. Communicate effectively with different team members included within the sedation steps.
5. Critically evaluate and synthesize current literature on pediatric dental sedation and develop a comprehensive literature review that supports evidence-based research.

Values:

1. Implement the code of dental ethics and professionalism in their relationship with supervisors, patient and their guardians, peers and auxiliaries.

Topics:

1. Introduction to Advanced conscious sedation Course: Course Schedule, course passing requirement, Study Material, Faculty Member, and Assessment Strategy.
2. Introduction to sedation
3. Routes of sedation
4. Pharmacokinetics and pharmacodynamic of different medication used in sedation
5. Drugs commonly used for sedation
6. Case selection for different routes of sedation
7. Applications of nitrous oxide for procedural sedation in the pediatric population lecture and workshop at JEDMED center
8. Sedation complications and adverse events.
9. Introduction to the simulation room
10. Crisis resource management
11. Procedural sedation and analgesia in children
12. Practice Guidelines for Sedation and Analgesia by Non-Anesthesiologists
13. AAPD (Guidelines for Monitoring and Management of Pediatric Patients Before, During, and After Sedation for Diagnostic and Therapeutic Procedures, literature review for sedation and anesthesia)
14. Case presentation and case-based learning and discussion
15. Crash Cart presentation
16. Pediatric sedation in clinical skill lab, Crisis resource management (Practical)
17. Clinical Conscious Sedation Cases (clinical)

Teaching Methods:

1. In class activity with discussion and feedback
2. Lectures with interactive discussion
3. Interactive discussion in laboratory sessions with feedback
4. Simulation
5. Case- based presentation & discussion (CBD)
6. Interactive discussion in laboratory/clinical sessions with feedback
7. Seminars (Scientific article discussion)
8. Self-directed learning

Evaluation Methods:

Continuous Assessment

1. Case-based Discussion using rubric (CBD): 20%
2. Workplace-based Assessment (Practical performance via rubric): 10%
3. Oral presentation and discussion: 20%
4. In class participation activity: 10%

Final Assessment:

1. Research Project Final Assessment: 20%
2. Competency Exam (CE) (Practical/ Clinical / Simulated):
    a. High fidelity sedation: 15%
    b. Low fidelity identification: 5%

Course Code	Course Title	Credits	Prerequisite
PDS 936	Advanced Clinical Pediatric Dentistry (2)	**2**	**PDS 933**

Course Objective:

This course aims to deepen the knowledge and sharpen the evidence – based clinical skills, increase the confidence, and improve the time management of postgraduate students through exposure to various clinical cases & scenarios with the encouragement to discuss the treatment plans and treating more complex cases.

At the end of this course the postgraduate student should be able to:

Knowledge:

1. Recognize the causes of oral conditions for each patient to create personalized prevention plans and its effect of the child wellbeing.
2. Develop awareness on building clinical decisions based on research evidence.

Skills:

1. Conduct a thorough comprehensive exam and treatment plan based on patient requirements, considering the necessity of each diagnostic record.
2. Apply evidence-based knowledge in clinical decision making while treating advanced and complex cases.
3. Communicate effectively with all dental team members, patients, other dental disciplines, referral and documentation.
4. Demonstrate advanced proficiency in the application and facilitation of soft skills through the structured presentation of clinical cases, engagement in clinical teaching of undergraduate students, and active participation in community-based professional activities

Values:

1. Demonstrate ethical and professional code of conduct
2. Encourage self-learning by using evidence-based dental practices to enhance critical thinking, and clinical decision-making based on current scientific evidence and best practices.
3. Demonstrate Leadership skills, teamwork, and their ability to transfer the knowledge in a community work

Topics:

1. Case Based Learning (CBD).
2. Clinical session.

Teaching Methods:

1. Interactive discussion in laboratory/clinical sessions with feedback
2. Clinical demonstration & practice with feedback

Evaluation Methods:

Continuous Assessment

1. Case-based Discussion using rubric (CBD): 5%
2. Case complete evaluation via rubric: 10%
3. Submission of required documents via rubric: 10%
4. Supervision of Undergraduate Supervision via rubric: 2%
5. Participation in a community Service via rubric: 3%
6. ER coverage via rubric: 5%

Final Assessment:

Semi Annual Evaluation:

1. Clinical Assessment via Semi-Annual Postgraduate Assessment evaluation form (SAPA): 20%
2. Clinical Performance Evaluation:
    a. Via electronic file system: 20%
    b. Via domains: 20%
3. Self assessment: 5%

Course Code	Course Title	Credits	Prerequisite
PDS 938	Advanced Pediatric Dentistry Articles (2)	**2**	**PDS 932**

Course Objective:

By the end of this course, the student should be able to:

1. Recognize evidence related to different preventive measures pediatric patients and dental caries
2. Describe evidence related to prevalence and etiology of early childhood caries
3. Critically appraise scientific articles
4. Recognize the aspects of management of dental caries and molar incisor hypomineralization, the role of microbiome in dental caries, and new trends related to dental treatment of pediatric patients through evidence-based dentistry
5. Present evidence related to trends for behavior management according to children's development stage and parental style.
6. Recognize aspects related to nicotine use, COVID-19, and dental caries through evidence-based dentistry.
7. Develop skills in presenting research results in public
8- Discuss updated research data obtained in Saudi Arabia related to different topics
9- Write and publish a systematic review paper on a selected topic
10. Finalize a systematic review paper according to a journal guideline, ready for publication

At the end of this course the postgraduate student should be able to:

Knowledge:

1. Recognize evidence related to the prevalence, etiology and management of oral diseases in pediatric dentistry
2. Discuss current updates and new trends in pediatric dentistry, nicotine use, COVID-19, and oral conditions through evidence-based dentistry.
3. Discuss updated research data obtained in Saudi Arabia related to different dental topics

Skills:

1. Critically appraise scientific articles, data extraction, and formulate a literature review
2. Write a systematic review paper based on PRISMA guidelines
3. Present a presentation showing the steps of a systematic review of the pre-assigned topic
4. Utilize software applications in searching and presenting electronic database findings and incorporate the latest findings.

Values:

1. Apply ethical standards in searching and preparing the literature
2. Adopt a lifelong learning philosophy and pursue professional development.

Topics:

1. Recent Prevalence and Challenges of Early Childhood Caries
2. Prevalence and treatment of severe caries in the first permanent molar
3. Early Childhood Caries and Microbiome
4. Diet and Microbiome
5. Microbiome and other diseases
6. Effectiveness of Salvadora persica in preventing dental caries
7. Nicotine use and dental caries
8. Nicotine use and mental health
9. Nicotine use and congenital anomalies
10. COVID-19, pandemic, and crisis effects on Oral/systematic / Mental health
11. New trend in dental management (Anesthesia, Isolation, Treatment)
12. Trends for behavior management according to children's development stage and parental style
13. Gingival and periodontal disease in children, prevalence
14. Gingival and periodontal disease in children: Classification system (strengths and limitations), and management
15. Exam presentation (Select an updated topic as for a systematic review and write the search strategy)

Teaching Methods:

1. Seminars /Scientific article discussion
2. In class activity with discussion and feedback (Article review and critique)

Evaluation Methods:

1. Oral presentations (continuous assessment): 60%
2. Written Exam - The exam systematic review paper of course PDS 938 ready for publication: 30%
3. Oral Exam - Final Oral presentation: 10%

Course Code	Course Title	Credits	Prerequisite
PDS 937	Clinics for Children with Special Needs	**1**	

Course objectives:

The objectives of this course are to add to the students' knowledge and further improve their skills in attending to the oral health needs of CSHCN. These objectives encompass the identification of more health conditions that may be less prevalent and understanding their specific oral implications. Students are expected to diagnose orofacial issues through extracting crucial information from medical history and records and comprehensive clinical assessments.

Students are expected to formulate personalized prevention and treatment plans, and communicate these plans effectively to parents and colleagues, fostering collaborative care. Furthermore, students will be prepared to provide hospital consultations as needed. Additionally, mastering the creation of professional referral letters and effectively responding to incoming ones will ensure a seamless coordination of care for CSHCN. Finally, students will be prepared to professionally present one of their cases to an audience of faculty.

At the end of this course the postgraduate student should be able to:

Knowledge:

1. List common special health care needs, their oral manifestations, and medical and dental management protocols

Skills:

1. Diagnose orofacial health problems of children with health care needs (CSHCN)
2. Construct an individualized comprehensive prevention and treatment plan for a patient and deliver the required care
3. Evaluate full medical and dental histories from parents and extract relevant health information from medical records
4. Critically analyze and discuss the causes, symptoms, and potential treatments of various medical disorders.
5. Effectively and professionally communicate collaborate with classmates and with medical colleagues regarding CSHCN

Values

1. Demonstrate empathy and ethical conduct while providing dental care to CSHCN and their families, adhering to all relevant legal standards

Topics

1. **First Semester:**

Introduction to the course
Overview of medically compromised conditions in pediatric patients.
Medical Histories and Emergency Protocols
Taking comprehensive medical histories and detailed consultations.
Emergency protocols in dental settings.
Craniofacial Anomalies
Cleft lip and palate and Hemifacial Microsomia.
Craniofacial syndromes (Apert, Crouzon, Pierre Robin Sequence and Treacher Collins).
Cardiovascular Disorders
Common cardiovascular conditions and other related syndromes in children.
Dental management for children with cardiovascular diseases.
Down Syndrome
Interdisciplinary approach. Collaboration with medical professionals.
Hematological Disorders
Hemophilia, sickle cell anemia, and Thalassemia
Dental procedures and precautions.
Endocrine Disorders
Diabetes, thyroid disorders, and growth hormone problems.

2. **Clinical Sessions**

Teaching Methods:

1. Self-directed learning
2. In-class activity with discussion and feedback
3. Interactive discussion in clinical sessions with feedback

Evaluation Methods:

Continuous Assessment

1. Case-based Discussion via rubric: 40%
2. Workplace-based Assessment (Clinical performance via rubric): 40%
3. Attendance policy / Class participation: 5%

Final Assessment:

1. Competency Exam (CE) - Consultations:15%

Course Code	Course Title	Credits	Prerequisite
PDS 940	Multidisciplinary Clinic	**2**	

Course Objectives:

The course aims to train the post graduate students after consultation with other specialties and under the supervision of such consultations, to be able to:

1. Diagnose orofacial health problems of children and adolescents, including those with health care needs
2. Communicate effectively with other specialties
3. Write referral letters for medical and other dental specialties
4. Accomplish a multidisciplinary treatment for a child or adolescent that present such problems.
5. Present a treated multidisciplinary case for evaluation

At the end of this course the postgraduate student should be able to:

Knowledge:

1. Understanding the importance of timely consultations and referrals to ensure optimal patient care
2. Familiarity with comprehensive treatment planning beyond conventional preventive and restorative management.

Skills:

1. Diagnose orofacial health problems in children and adolescents, including those with special healthcare needs.
2. Demonstrate proficiency in utilizing dental radiographs and Cone Beam CT scans as diagnostic tools, accurately interpreting patient radiographs to formulate effective treatment plans.
3. Perform thorough and comprehensive clinical dental examinations for pediatric patients and develop treatment plans tailored to the specific needs and complexities of pediatric dental patients.
4. Present a multidisciplinary treatment approach for children or adolescents requiring such intervention or concise consultations and/or referral letters to medical and other dental specialties.
5. Communicate proficiently with patients, parents, dental assistants, technicians, and consultants.

Values:

1. Apply ethical and legal standards in the provision of dental care, including obtaining parental consent for treatment in accordance with established guidelines and regulations.

Topics:

1. The course offers clinical experience as a multidisciplinary approach. Students engage in case presentations and discussions with instructors who highlight pertinent medical concepts. Active participation, questioning, and proposing treatment plans are encouraged, fostering a collaborative learning environment. Instructors pinpoint knowledge gaps, facilitating in-depth discussions to ensure a well-rounded understanding. Ultimately, the course cultivates practical skills and patient-centered thinking, preparing students effectively for their future clinical endeavors.
2. Case - Based Presentation and Discussion – 2 cases

- Cases could be any of the following: (Endo case, Surgery case, Periodontal case, Prosthodontic case)
- Craniofacial cases (such as cleft lip and/ or palate cases)

Teaching Methods:

1. Interactive discussion in clinical sessions with feedback (observation-based assessment)
2. Interactive discussion in clinical sessions with feedback (performance-based assessment)
3. Interactive discussion in clinical sessions with feedback

Evaluation Methods:

Continuous Assessment

1. Clinical Cases / Case Portfolio Evaluation – 2 cases: 85%

Final Assessment:

1. Case - Based Presentation and Discussion of One of the Treated cases:15%

Course Code	Course Title	Credits	Prerequisite
PDS 941	Advanced Clinical Pediatric Dentistry 3	**2**	**PDS 936**

Course Objectives:

This course aims to deepen the knowledge and sharpen the evidence – based clinical skills, increase the confidence, and improve the time management of postgraduate students through exposure to various clinical cases & scenarios with the encouragement to discuss the treatment plans and treating more complex cases.

At the end of this clinical course the graduate student should be efficiently able to:

Knowledge:

1. Recognize the causes of oral conditions for each patient to create personalized prevention plans and its effect of the child wellbeing.
2. Develop awareness on building clinical decisions based on research evidence.

Skills:

1. Conduct a thorough comprehensive exam and treatment plan based on patient requirements, considering the necessity of each diagnostic record.
2. Apply evidence-based knowledge in clinical decision making while treating advanced and complex cases.
3. Communicate effectively with all dental team members, patients, other dental disciplines, referral and documentation.
4. Demonstrate advanced proficiency in the application and facilitation of soft skills through the structured presentation of clinical cases, engagement in clinical teaching of undergraduate students, and active participation in community-based professional activities

Values

1. Demonstrate ethical and professional code of conduct
2. Encourage self-learning by using evidence-based dental practices to enhance critical thinking, and clinical decision-making based on current scientific evidence and best practices.
3. Demonstrate Leadership skills, teamwork, and their ability to transfer the knowledge in a community work

Topics:

1. Case Based Learning (CBD)
2. Clinical session

Teaching Methods

1. Interactive discussion in laboratory/clinical sessions with feedback
2. Clinical demonstration & practice with feedback

Evaluation Methods

Continuous Assessment

1. Case-based Discussion using rubric (CBD): 5%
2. Case complete evaluation via rubric: 10%
3. Submission of required documents via rubric: 10%
4. Supervision of Undergraduate Supervision via rubric: 2%
5. Participation in a community Service via rubric: 3%
6. ER coverage via rubric: 5%

Final Assessment:

Semi Annual Evaluation:

1. Clinical Assessment via Semi-Annual Postgraduate Assessment evaluation form (SAPA): 20%
2. Clinical Performance Evaluation:
    a. Via electronic file system: 20%
    b. Via domains: 20%

Self assessment: 5%

Course Code	Course Title	Credits	Prerequisite
PDS 939	Advanced Hospital Dentistry	**2**	

Course Objectives:

Understanding Hospital Dentistry:
Graduate students will gain foundational knowledge in hospital dentistry, focusing on the unique aspects and requirements of managing dental patients in a hospital setting.

Multidisciplinary Collaboration:
Students will learn to work collaboratively with various healthcare professionals involved in maxillofacial rehabilitation, including oral surgeons, orthodontists, pediatricians, speech therapists, and pedodontists.

Management of Cleft Lip and Palate:
The course will equip students with the skills necessary to manage patients with clefts of the lip and palate through a comprehensive treatment approach that includes surgical and orthodontic interventions.

Dental Care for Medically Compromised Children:
Students will develop competencies in providing dental management for children with medical conditions such as blood diseases, hemorrhagic conditions, cardiovascular diseases, and cellulitis, emphasizing when hospitalization is necessary.

General Anesthesia Proficiency:
A four-week posting in General Anesthesia will be included to ensure that students are proficient in administering and managing general anesthesia for dental procedures.

Patient Admission and Management Skills:
Students will learn how to effectively admit and manage dental patients requiring hospitalization prior to treatment, ensuring their safety and comfort throughout the process.

Implementation of Oral Rehabilitation Protocols:
The course aims to prepare students to effectively carry out oral rehabilitation protocols tailored to individual patient needs within a hospital environment.

At the end of this course the postgraduate student should be able to:

Knowledge:

1. Identify the mode of action of the anesthesia during general anesthesia procedures.
2. Recognize dental patients that need to be hospitalized before treatment such as hemophiliacs, those with congenital or acquired heart defects, blood diseases, etc.

Skills:

1. Apply the required general anesthetic workup, assessment, admission, dictation, and discha healthy and SHCN patients.
2. Carry out the Oral Rehabilitation Protocol for healthy and SHCN patients under general ane
3. Ensure clear and effective communication with parents, patients, physicians, and the dental regarding all requirements for general anesthesia

Values:

1. Thoroughly document all necessary records for general anesthesia in strict adherence to professional codes of conduct.

Topics:

Admission of patient into the hospital ward, Pre-and post-surgery assessment, laboratory tests, O. R. Protocol, Writing and dictating O.R. reports, Management of hospitalized children who have (Blood disorders, Bleeding disorders, Cardio-vascular disease, Bone marrow transplant, Cancer, Cellulitis, Are chronically ill or emotionally handicapped), Participation in hospital interdisciplinary evaluation and treatment teams such as the cleft team or the hemophiliac team. An anesthesia rotation of four weeks' duration structured to provide students with knowledge and experience in the management of children and adolescents undergoing general anesthesia. The rotation is to include experience in (pre-operative evaluation, Assessing the effects of pharmacological agents, Venipuncture technique, patient monitoring, anesthetic induction and intubation, Administration of anesthetic agents, Prevention and management of anesthetic emergencies and patient recovery.

Teaching Methods:

3. Interactive discussion in laboratory/clinical sessions with feedback
4. Clinical demonstration & practice with feedback
5. Clinical sessions with feedback

Evaluation Methods:

Continuous Assessment

1. Case-based Discussion using rubric (CBD): 5%
2. Clinical Cases / Case Portfolio – 10 cases: 10%
3. File auditing: informed consent, documentation of clinical procedures – 10 cases: 10%
4. Workplace-based Assessment – (Clinical Performance Evaluation via rubric.:
    a. Assisting – Chair side / Table side: 5%
    b. Anesthesia / sedation rotation: 10%

Final Assessment:

i. **Semi Annual Evaluation:**

1. Clinical performance evaluation via electronic file: 30%
2. Clinical Assessment via Semi-Annual Postgraduate Assessment evaluation form (SAPA):20%

ii. **Clinical competency exam evaluation – Split mouth quadrant dentistry: 10%**

Course Code	Course Title	Credits	Prerequisite
PDS 999	Thesis	**12**	-

Course Objective:

By the end of this course, students should be able to:

1. Develop a clear and testable research hypothesis that addresses significant gaps in Pediatric Dentistry literature.
2. Execute a systematic literature review, employing advanced search strategies and critical appraisal techniques to synthesize relevant research findings.
3. Design a comprehensive experimental framework, utilizing sophisticated methodologies to rigorously analyze complex clinical problems.
4. Draft and defend a dissertation with high academic precision, while also preparing a peer-reviewed manuscript that contributes original knowledge to the field.

At the end of this course, the graduate student should be able to:

Knowledge:

1. Demonstrate an advanced understanding of the principles, methodologies, and ethical standards in pediatric scientific research.

Skills:

1. Analyze various hierarchies of evidence in Pediatric Dentistry to enhance research design and clinical practice.
2. Design independent research studies, utilizing advanced experimental methodologies, data collection techniques, and statistical analyses relevant to Pediatric Dentistry.
3. Formulate innovative and original research projects that address significant gaps in the literature and contribute to the advancement of knowledge in the field.
4. Analyze complex research findings, integrating them with existing literature to draw impactful conclusions and recommendations.
5. Present research findings for academic and professional audiences, demonstrating effective communication skills.
6. Conduct high-quality research proposals, theses, and manuscripts that reflect academic excellence, demonstrating rigorous scholarly writing and critical thinking.

Values:

1. Demonstrate a strong commitment to ethical standards and professional integrity in researc and clinical practice, fostering a culture of accountability and lifelong learning.

Topics:

1. Research proposal writing includes the following: selection of a research problem, proposing a question that can be researched, statement of a hypothesis, sample size calculation, procedures for collecting data and the statistical analysis involved, and time to complete the study.
2. Introduction.
3. Review of literature relevant to the research.
4. Research methodology.
5. Research results.
6. Discussion.
7. Summary and conclusions.
8. Recommendations /future works related to the research.
9. References selection and writing.
10. Thesis defense.
11. Paper publication / Conference presentation

Teaching Methods:

1. Attendance of suitable courses in the program
2. Supervisor's instructions & discussion with feedback
3. Self-directed learning

Evaluation Methods:

1. Research reports: Pass/Fail
2. Research Proposal / Ethical Approval: Pass/Fail
3. Semiannual evaluation report on student's progress using rubric.: Pass/Fail
4. Research Paper / Conference Presentation [Either publishing two research papers or publishing one research paper and attending a relevant conference to present their work]: Pass/Fail
5. Plagiarism Report for research work: Pass/Fail
6. Thesis defense: Pass/Fail

Course Code	Course Title	Credits	Prerequisite
PDS 908	Dental Forensic (E)	**1**	

Course Objectives:

The objective of this course is to guide the students in understanding the basic concepts in the field of forensic dentistry, the dentist's role in forensic teams and the basic techniques used in forensic dentistry.

At the end of this course the postgraduate student should be able to:

Knowledge:

1. Identify the basic concepts in the field of forensic dentistry.
2. Describe the dentist's role in forensic teams.
3. List the basic techniques used in forensic dentistry.

Skills:

1. Summarize available literature about forensic dentistry.
2. Discuss updated literature
3. Demonstrate good presentation skills

Values:

1. Communicate effectively with mentors and peers
2. Respect others' opinions during discussions

Topics:

1. Introduction to the field of forensics
2. History of forensic dentistry
3. Basic definitions used in forensic dentistry
4. Members of the forensic team
5. Forensic dentistry organizations
6. Forensic dentistry training
7. Forensic dentistry in Saudi Arabia
8. Techniques used in forensic dentistry:

- Bite marks
- X-rays
- Dental records
- Dental casts
- Lip prints

9. Age estimation
10. Role of DNA in forensics
11. Forensics and cases of abuse
12. Forensics and mass disasters identification

Teaching Methods:

Oral presentations and discussions

Evaluation Methods:

1. Attendance: 20%
2. Presentations and discussions: 50%
3. Submitted paper: 30%

Course Code	Course Title	Credits	Prerequisite
PDS 912	Craniofacial Anomalies (E)	**1**	

Course Objectives:

Develop a deep understanding of the normal growth and anomalies of the craniofacial and dental structures, differentiate any deviation or abnormal patterns of growth and development

At the end of this course the postgraduate student should be able to:

Knowledge:

1. Demonstrate a comprehensive understanding of the principles and theories of craniofacial growth and anomalies including prenatal and postnatal factors influencing craniofacial structures.
2. Acquire in-depth knowledge of normal craniofacial growth and development, including the sequential changes in dental and skeletal structures from infancy through adolescence.
3. Understand the molecular, cellular, and genetic mechanisms underlying craniofacial growth and development.
4. Identify and describe the craniofacial anomalies

Skills:

1. Develop skills in assessing and analyzing craniofacial growth and development using appropriate diagnostic tools and techniques, such as cephalometric analysis and growth charts
2. Differentiate normal patterns of craniofacial growth and development from deviations or abnormal variations, including identifying dental and skeletal malocclusions.
3. Apply critical thinking and problem-solving skills to evaluate craniofacial growth and development in orthodontic treatment planning and decision-making.
4. Interpret and integrate craniofacial anomalies information with other diagnostic findings to develop comprehensive treatment plans.

Values:

1. Foster a patient-centered approach in understanding craniofacial growth and development, recognizing the impact of individual variations and their implications for orthodontic treatment.
2. Emphasize the importance of evidence-based practice in craniofacial growth and development, integrating current research findings and emerging knowledge into clinical decision-making.

Topics:

1 Introduction to Growth & Development
2 Basic Concepts in Growth & Development
3 Overview of Cleft lip and palate.
4 Genetics of Craniofacial Anomalies and Genetic Counseling
5 Surgical Management of Cleft Lip and Palate- Lip Surgery-Alveolar Bone Grafting
6 Surgical Management of Cleft Lip and Palate- Cleft Orthognathic Surgery
7 Craniofacial Microsomia
8 Speech and Velopharyngeal Insufficiency
9 Audiology
10 Psychosocial Considerations
11 Considerations for cleft patients
12 Craniosynostosis
13 Final/Midyear exams

Teaching Methods:

Oral presentations and lectures/seminars

Evaluation Methods:

1. Quiz 1: 20%
2. Midyear exam: 30%
3. Assignment 1- Oral presentation: 5%
4. Assignment 2- Oral presentation: 5%
5. Assignment 3- Oral presentation: 5%
6. Final exam: 35%

Course Code	Course Title	Credits	Prerequisite
PDS 914	Practice Management (E)	**1**	

Course Objectives:

The course will include (but not limited to) patient recruitment and quality assurance in orthodontic practice and time management.

At the end of this course the postgraduate student should be able to:

Knowledge:

1. List the essentials for leadership and success in dentistry and in general
2. Define policies and its advantages in management system.
3. Identify the types of management meetings.
4. Identify what are the items that should be in great managers and leaders?
5. Define the parts of human resource management (HRM).
6. Recognize the value of setting SMART objectives leading an organization

Skills:

1. Describe what is strategic management
2. Explain the standard cycle or loop of the management process
3. Analyze the difference between short-term and long-term objectives
4. Explain how quality management adds to an organization's goals.
5. Assess any risk management in successful practice
6. Analyze the importance of the role of using Information technology (IT) in successful practice.
7. Explain the objective of financial statements
8. Understand how to interpret financial information (the balance sheet, income statement, and cash flow statement).

Values:

1. Appreciate the value of being successful dentist in the community
2. Grasp the Items that should be in great managers
3. Understand and adhere to the rules and regulation of practicing dentistry in Saudi Arabia government sectors)

Topics:

1 Introduction to the course and Item of successful dentist
2 Strategic management
3 Human resource management
4 Quality management
5 Information management
6 Financial management
7 Practice Management Seminar (PMS)
8 Book Review Student presentations

Teaching Methods:

Lectures and discussions

Evaluation Methods:

1. Class participation: 10%
2. Quiz: 20%
3. Submit a written assignment on “Practice Management Seminar (PMS)”: 20%
4. Final exam as Evaluation of Book review presentations*: 50%

Course Code	Course Title	Credits	Prerequisite
OBCS 911	Diet and Nutrition (E)	**1**	

Course Objective:
At the end of this course, the graduate student will acquire a full range of genetic disease, in particular pediatric dentistry associated genetic disease/syndromes. Student can apply knowledge during clinical practice and get involve in research.
At the end of this course, the graduate student should be able to:

Knowledge:
1. Discussed the diet analysis and its importance
2. Identify the PICO elements in the search.

Skills:
1. Complete diet analysis for different patients
2. Search for a nutrition-related topic using the PICO elements
3. Choose articles to be included in the review.
4. Analyze the resulted articles using critical appraisal
5. Write clear and concise report of nutrition-related topic

Values:
1. Appreciation for the importance of a healthy diet and nutrition for overall health and wellbeing.
2. Respect for cultural and social differences in food choices

Topics:

1	WHO Guidelines: Sugar intake for children
2	WHO Guidelines: Obesity and children: what could the future hold?
3	Translation of both WHO findings to the Middle East community
4	Recommendations for your practice; this can be in the form of an ad/pamphlet/public service announcement/anything on social media
5	Diet Analysis

Teaching Methods:
Active learning and discussions

Evaluation Methods:
1. Continuous assessment: 70%
2. Final diet analysis assignment: 30%

Course Code	Course Title	Credits	Prerequisite
OBCS 900	Advanced Oral Biology (E)	**1**	

Course Objective:

This course is designed primarily to offer advanced scientific experience for the graduates. The goal is to provide up-to-date excellent background for better clinical practice

At the end of this course, the graduate student should be able to:

Knowledge:

1. Recognize the mechanisms of biological process and reactions in the oral cavity.
2. Demonstrate understanding of cellular and molecular events behind biological behavior of o tissues and how they affect clinical outcomes.
3. Outline the important biological process in the oral cavity which increase the efficiency duri his/her clinical training

Skills:

1. Apply their understanding of oral biological processes to the clinical practice
2. Use what has been taught in this course to understand the true nature of any oral disorders and able to monitor any changes in the normal tissues.
3. Work in teams, negotiate, and deliver the information in professional way
4. Understand and communicate different forms of arguments effectively in a variety of contexts

Values:

1. Apply the ethical and legal standard acquired knowledge in identifying problem, evalua assumptions, implications, and consequences, and transfer this knowledge to clinical situations

Topics:

1 Introduction to oral Biology research
2 Bone biology and regeneration
3 Tooth development and anomalies
4 Oral biofilm
5 Oral environment

Teaching Methods:

Lectures and assignments

Evaluation Methods:

1. Article summary assignment: 30%
2. Final written exam: 70%

COURSES FROM OTHER FACULTIES

Course Code	Course Title	Credits	Prerequisite
MLTD 901	Genetics Diseases (M)	**1**	

Course Objective:

At the end of this course, the graduate student will acquire a full range of genetic disease, in particular pediatric dentistry associated genetic disease/syndromes. Student can apply knowledge during clinical practice and get involve in research.

At the end of this course, the graduate student should be able to:

Knowledge:

1. Discussed the basics of genetics
2. Identified genetic aspects of most common diseases
3. Discussed molecular and cell biology of DNA, RNA and protein structure and function

Skills:

1. Differentiate between tools used for genetic diagnosis in laboratory
2. Pedigree analysis to detect the inheritance pattern
3. Apply genetic evidence-based dentistry for patient care
4. Design genetic counseling as per molecular diagnostic reports
5. Search for genetic problems related to oral health
6. Design programs for patients and community to solve the oral health problems

Values:

1. Apply the ethical and legal standards in the provision of dental care

Topics:

1 Basics of genetics, gene and chromosome structure

2 Gene/chromosome replication

3 Gene transcription and function,

4 Protein synthesis,

5 Hereditary traits in families, different types of inheritance,

6 Variation in gene/Chromosome and common genetic disease/Syndrome

7 Genetic aspects of most common dental diseases/syndromes.

Teaching Methods:

Lectures

Evaluation Methods:

1. Written test: **70%**
2. Oral test: **30%**

Course Code	Course Title	Credits	Prerequisite
EDTD 906	Advanced Medical Education and Clinical Teaching Skill	**2**	

Course Objective:

Evaluation of a curriculum, designing and aligning teaching strategies with assessment tools.

At the end of this course, the graduate student should be able to:

Knowledge:

1. List items of a curriculum evaluation checklist
2. Select appropriate teaching strategies and its assessment method(s)

Skills:

1. Present information clearly and accurately
2. Align teaching strategies to assessment methods

Values:

1. Appreciate the importance of course evaluation and development

Topics:

1 Curriculum design and evaluation
2 Teaching strategies form the lecture to the clinical session
3 Assessment tools selection, application, and evaluation

Teaching Methods:

1. Self-reading
2. Lectures
3. Seminars
4. Small group discussions

Evaluation Methods:

1. Assignment - Submit a curriculum evaluation checklist:10%
2. Assignment - Design and present a presentation: 25%
3. Assignment - Attend and report on an educational workshop: 10 %
4. Assignment - Design and submit and assessment method : 10 %
5. Oral test: 5%
6. Final written test: 40%

Course Code	Course Title	Credits	Prerequisite
BCHD 910	Cell and Molecular Biology (M)	**2**	

Course Objective:

1. To explain the key tenants of cellular and molecular biology
2. To understand the design and significance of crucial experiments from the history of cellular and molecular biology
3. To describe common molecular biology experimental methods and techniques used in clinical testing for diseases diagnosis.
4. To recognize multiple important practical applications that have arisen from the field of molecular biology

At the end of this course, the graduate student should be able to:

Knowledge:

1. Demonstrate an understanding of the current concepts of DNA structure, maintenance, repair, a their different gene mutations.
2. Explain the processes involved in gene organization, replication and expression in both prokaryo and eukaryotic systems
3. Demonstrate an understanding of the tools used in recombinant DNA technology includi enzymes, host-vector systems and techniques for gene isolation, cloning and characterization
4. Understand the recent advances in molecular biology of gene therapy, stem cell in order to kn their clinical significance.

Skills:

1. Perform basic molecular laboratory knowledge and tool by utilizing specific equipment's a instruments that used in molecular biology clinical testing

Values:

1. Practice the skill of self-learning, teamwork and communication with peers.

Topics:

Lectures

1 Organization of the cell nucleus
2 Overview of nucleic acids
3 DNA packing and chromosome
4 Replication
5 Transcription
6 Post-transcriptional modification of RNA
7 Regulation of gene expression
8 Translation
9 Gene Expression
10 RNA interference and Epigenetics
11 Types of mutations
12 DNA repair
13 Cell cycle
14 Cancer Genetics
15 Tools in molecular medicine I
16 Tools in molecular medicine II

SPP

17 The human genome project
18 Gene therapy
19 Stem cell technology

Practical

1 DNA isolation using Manual Method
2 DNA isolation using Commercial Kit
3 RNA isolation using Phenol Method
4 Gene expression experiment demonstration

Teaching Methods:

1. Lectures
2. Self-learning task
3. Practical session

4. Clinical demonstration & practice with feedback

Evaluation Methods:

5. Lab reports: 25%
6. SPP: 15%
7. Assignment: 25%
8. Final exam: 35%

Course Code	Course Title	Credits	Prerequisite
ANSD 930	General Anesthesia for children	**2**	

Course Objective:

This course aims to improve the knowledge and clinical skills of postgraduate students of pediatric airway management, pediatric analgesia and anesthesia through series of flipped classroom sessions, clinical operating room sessions and in the simulation lab practice and decision making through CBL sessions and clinical management of complex cases. Postgraduates are encouraged to treat more complex cases and to establish a systematic way for their clinical decision making and time management.

At the end of this course, the graduate student should be able to:

Knowledge:

1. To describe the basic pharmacological properties of the common medication used in anesthesia a pain management.
2. To recognize indications, contraindications, complications and risk benefit of different types anesthesia

Skills:

1. To recognize indications, contraindications, complications and risk benefit of different types anesthesia
2. To develop an approach for the basic management of critically ill patients
3. To interpret clinical data obtained by history, examination and investigations to recommend ba plans for pain management

Values:

1. To be able to work in a team with other health professionals

Topics:

1 Pediatric Patient's anatomy, physiology and psychology
2 Pediatric Anesthesia Pharmacology
3 General Anesthesia: Theories & types
4 Pre-Anesthesia assessment, risk management and optimization
5 Anesthesia Equipment, workstation and setup
6 Intra-operative monitoring for GA dental cases
7 Post Anesthesia monitoring and discharge planning
8 Peri-operative Pain: Physiology, pharmacology and Management
9 Challenging cases of Pediatric Dental anesthesia
10 Peri-operative Patient Safety and GA complication Management
11 Peri-operative Crisis Resource Management

Teaching Methods:

1. Clinical OR session
2. Case-Based Discussion
3. Simulation session

Evaluation Methods:

1. Workplace-based Assessment (Practical performance) - clinical case Training (OR) **5%**
2. Case presentation and Discussion **50%**
3. Workplace-based Assessment (Practical performance) - case complete evaluation submission **10%**
4. Assignment (Simulation session) **10%**

Course Code	Course Title	Credits	Prerequisite
OBCS 913	Diagnostic Evaluation (E)	**1**	

Course Objective:

To provide postdoctoral students with advanced information in oral and maxillofacial radiology needed for radiologic management of patients with complex diagnostic problems.

At the end of this course, the graduate student should be able to:

Knowledge:

1. Describe the fundamentals of digital imaging and how it is integrated into the practice of dentistr
2. Describe advanced imaging techniques appropriate for the diagnosis of patients with compl abnormalities including techniques such as CBCT, computed tomography (CT) and magne resonance imaging (MRI).
3. Demonstrate knowledge of cross-sectional anatomy of the mandible and maxilla.
4. Describe the indications, contra-indications, advantages, and limitations of different common den radiographic examinations.

Skills:

1. Recognize and describe radiographic signs of some maxillofacial diseases including parana sinuses diseases, bone diseases, inflammatory conditions, developmental anomalies, and TMD.
2. Compare and contrast between digital and film-based imaging in the practice of dentistry
3. Compare different imaging modalities used in the diagnosis and management of patients w complex abnormalities regarding indications, contra-indications, advantages, and limitations.
4. Correlate radiographic signs of some maxillofacial diseases to their clinical presentation.

Values:

1. Apply all ethical standards related to radiation risks of dental x-ray procedures and radiation safe program in dental practice.

Topics:

1 Radiation Risk and Protection in Dentistry.
2 Digital Imaging and Image Processing.
3 CT and MRI in Dentistry.
4 Cone Beam Computed Tomography (CBCT).
5 Radiographic Prescription Guidelines.
6 .Review of Principles of Radiologic Interpretation
7 Sinuses Diseases.
8 Bone Diseases.
9 Inflammatory Conditions.
10 Developmental Anomalies.
11 Temporo-Mandibular Dysfunction/Disorders (TMD).

Teaching Methods:

Lectures, presentations, assignments and discussions

Evaluation Methods:

1. Presentation assignment: 8%
2. Question & answer assignment: 24%
3. Final written exam: 60%

Course Code	Course Title	Credits	Prerequisite
BCHD 904	Clinical Laboratory Medicine (E)	**2**	

Course Objective:

1. To acquire and understand the various laboratory techniques for diagnosis purposes
2. To understand the design and significance of crucial experiments from the history of cellular and molecular biology
3. To describe common molecular biology experimental methods and techniques used in clinical testing for diseases diagnosis.
4. To recognize multiple important practical applications that have arisen from the field of molecular biology

At the end of this course, the graduate student should be able to:

Knowledge:

1. Demonstrate a comprehensive understanding of the principles and practices of clinical laborato medicine, including laboratory techniques, instrumentation, and quality assurance.
2. Identify and explain the etiology, pathogenesis, and clinical manifestations of common diseas (Diabetes Mellitus)
3. Analyze and interpret laboratory test results, including biochemical, hematological, microbiologic and immunological tests, to aid in the diagnosis and management of disease.
4. Evaluate the role of laboratory medicine in the healthcare system, including its contribution disease prevention, diagnosis, treatment, and public health.

Skills:

1. Apply critical thinking related to routine laboratory tests, including sample collection, preparatic and analysis, using appropriate laboratory techniques and equipment.
2. Apply critical thinking and problem-solving skills to interpret laboratory test results, ident potential errors or inconsistencies, and troubleshoot technical problems.

Values:

1. Practice the skill of self-learning, teamwork and communication with peers

Topics:

1	Introduction to Clinical Laboratory Medicine
2	Body Fluids
	Biochemistry and function of saliva
	The Diagnostic Applications of Saliva
3	Acid-Base Balance (&their disorders)
4	Diabetes mellitus and diabetic complications
	Oral manifestations of Diabetes Mellitus
5	Minerals & electrolytes metabolism & disorders
6	Thyroid and parathyroid dysfunction
7	Assessment of adrenal functions
	The effect of Ca abnormality on bone and teeth health
8	Clinical biochemistry of the cardiovascular system, Lipids, and disorders of lipoprotein metabolism
	The relation between Gum disease and heart disease
9	GIT and Liver function Tests
10	Laboratory Evaluation of Kidney Function
	Oral manifestations of systemic disease
11	POCT tests

Teaching Methods:

Online or traditional lectures, followed by case-based discussion, practical sessions and SPP.

Evaluation Methods:

1. SPP: 40%
2. Assignment: 20%
3. Review article: 40%

Course Code	Course Title	Credits	Prerequisite
MLTD 909	Genetic Laboratory (E)	**2**	

Course Objective:

At the end of this course, the graduate student will acquire a full range of experiments and lab techniques useful for genetic disease analysis.

At the end of this course, the graduate student should be able to:

Knowledge:

1. Discuss the various laboratory techniques for diagnostic purposes
2. Explain different genetic analysis

Skills:

1. Perform DNA isolation for diagnostic purposes
2. Perform PCR for gene amplification
3. Perform sequencing technique for determining nucleotides in DNA
4. Conduct genetic test identifying dental genetic problems

Values:

1. Apply the ethical and legal standards in Sample collection

Topics:

1 Best lab practice and precautions, sample collection
2 DNA extraction
3 RNA Extraction
4 Gel electrophoresis and visualization
5 Gene amplification
6 Sanger Sequencing
7 Cytogenetics and karyotyping

Teaching Methods:

Lectures and assignments

Evaluation Methods:

1. Written Test: 50%
2. Oral test: 30%
3. Assignment: 20%

Course Code	Course Title	Credits	Prerequisite
BCHD 915	Molecular Genetics (E)	**1**	

Course Objective:

1. To explain the key tenants of molecular genetics
2. To understand the design and function of DNA
3. Describe the latest advances in molecular genetics research.
4. Apply genetic techniques to solve problems in medical field

At the end of this course, the graduate student should be able to:

Knowledge:

1. Demonstrate an understanding of the current concepts of DNA structure, maintenance, repair, a their different gene mutations.
2. Explain the processes involved in gene organization, replication and expression in both prokaryo and eukaryotic systems
3. Demonstrate an understanding of the tools used in recombinant DNA technology includi enzymes, host-vector systems and techniques for gene isolation, cloning and characterization
4. Understand the recent advances in molecular biology of gene therapy, stem cell to know th clinical significance.

Skills:

1. Perform basic molecular laboratory knowledge and tool by utilizing specific equipment's a instruments that used in molecular biology clinical testing

Values:

1. Practice the skill of self-learning, teamwork and communication with peers.

Topics:

No	List of Topics
Lectures	
1	Organization of the cell nucleus
2	Overview of nucleic acids
3	DNA packing and chromosome
4	Replication
5	Transcription
6	Post-transcriptional modification of RNA
7	Regulation of gene expression
8	Translation
9	Gene Expression
10	RNA interference and Epigenetics
11	Types of mutations
12	DNA repair
13	Cell cycle
14	Cancer Genetics
15	Tools in molecular medicine I
16	Tools in molecular medicine II
SPP	
17	The human genome project
18	Gene therapy
19	Stem cell technology
Practical	
1	DNA isolation using Manual Method
2	DNA isolation using Commercial Kit
3	RNA isolation using Phenol Method
4	Gene expression experiment demonstration

Teaching Methods:

Online or traditional lectures, followed by case based discussion, practical sessions and SPP.

Evaluation Methods:

1. Lab reports: 25%
2. SPP: 15%
3. Assignment: 25%
4. Final exam: 35%