



King Saud University, College of Dentistry
Department of Pediatric Dentistry and Orthodontics
DIVISION OF PEDIATRIC DENTISTRY

POS 312
PRE-CLINICAL PEDIATRIC DENTISTRY
Thursday, 8:00 – 12:00 noon [GUC]
Academic Year 2015G [1436H]

Course Director : **Dr. Zain Z. Hafiz [GUC]**

Course Contributors :
Dr. Asma Al-Jobeir
Dr. Nouf Al-Hammad
Dr. Nourah Al-Essa
Dr. Rehab Allam
Dr. Rasha Al-Dabaan
Dr. Manal Al-Mutairi
Dr. Majdah Al-Homidhi
Dr. Latifah Al-Howaish
Dr. Tahani Azizalrahman

Course Number : 312

Course Code : POS

Credit Hour : Three (3) Credit Hours

Pre-Requisite Course : 213 RDS

Location in the Curriculum : Third Year

Required Textbook : Pediatric Dentistry:
Infancy Through Adolescence
By: Jimmy Pinkham
Mosby, 4th Edition, 2005

Course Description:

This is a three credit-hour course made up of both Didactic and Laboratory technique to constitute pre-clinical Pediatric Dentistry. The course holds in the second half of the third year.

The primary goals of Pediatric Dentistry include the diagnosis and prevention of disease, the preservation of the natural dentition and the restoration of health, function and esthetics of stomatognathic system. The lectures will cover all these topics.

The primary function of the laboratory is the development of psychomotor skills of the dentist. The psychomotor skills must be highly developed in order to provide quality care of the children.

Due to the high degree of skill required, disappointments and frustrations may occur during the process of learning and development. Some students, for example, will need to repeat various projects. However, the pre-clinical laboratory is the place where mistakes can occur without damage to the patient, and where skills can be developed to a high level of proficiency.

In order to maximize the benefits of each laboratory session, students will be expected to study the laboratory manual preparation for each project.

Course Objectives:

Upon completion of this course, the student should be able to:

- Describe morphological characteristics of primary dentition (1.3)
- Prepare cavities in primary teeth and place restorations effectively so as to restore anatomical landmarks (1.3)
- Diagnose dental caries in primary dentition (2.1)
- Explain preventive measures against dental diseases in children. (2.1)
- Preserve the natural dentition and restore health, function, and esthetics of decayed primary dentition (1.3)
 - Demonstrate manual dexterity required to provide quality dental care for children (5.1)

Recommended Textbook:

- i) Every student is required to purchase the recommended textbook.
- ii) Lectures will be given from the book; students are required to read the assigned chapters for every lecture. The lecture may not cover everything. Examinations will be from the lectures and respective chapters in the textbooks.

Attendance:

Students **MUST** attend all lectures and laboratory exercises, and be **ON TIME**. Student who fails to attend a lecture/lab., he/she must report to the **COURSE DIRECTOR** the reason behind his/her absence. Any student who fails to attend 75% of the lectures/laboratory exercises will not be allowed to sit for the **FINAL EXAMINATION**. No excuse whatsoever.

Grading:

- Didactic - 50%
- Laboratory - 50%

Students **MUST** pass both parts individually to pass the course. If a student passes the didactic but fails the laboratory part, or vice versa, he/she will not pass the course.

Didactic (50%):

The evaluation for the lecture part will be as the following:

- Mid-Term Exam [Essay/short note questions] (15%)
- Final Exam [Multiple choice questions and Essay/Short note] (25%)
- Quizzes (10%)

Laboratory (50%):

The evaluation for the laboratory projects will be as the following:

Weekly projects /Cleanliness of the cubicle/Behavior	25%
Midterm exam [specific lab procedure]	10%
Final Exam [specific lab procedure / spot exam]	15%

Quizzes:

During the course, weekly quizzes will be given at the beginning of the lecture which includes (previous lecture and laboratory project for the same day). Failure to participate attracts zero mark.

Course Outline [DIDACTIC]:

- Development and morphology of the primary dentition.
- Dental caries in the child and adolescent
- Restorative Dentistry
 - I : Posterior Restorations
 - II : Anterior Restorations
 - III : Stainless Steel Crowns
- Pulp therapy for the primary dentition.
- Local anesthesia and the use of the rubber dam.
- Prevention of dental diseases.
- Space maintenance in the primary dentition.
- Oral habits.
- Examination of the child patient.

Course Outline [LABORATORY] Operative Technique:

The following procedures shall be carried out by students in the Phantom Head Laboratory on ivorene or natural teeth.

Occlusal cavity	# 54
Occlusal cavity	# 84
Occluso-lingual (OL)	# 55
Mesio-occlusal (MO)	# 55
Mesio-occlusal (MO)	# 85
Disto-occlusal (DO)	# 74
Forming and placing T-band matrix	
Preventive resin restoration	Permanent molar / premolar
Stainless steel crown preparation	# 75
Pulpotomy (Primary molar)	Extracted tooth
Composite crown (Strip)	# 61
Fissure sealant (Permanent Molar)	Extracted tooth
Fluoride application	Demonstration
Extraction techniques in children	Demonstration
Space maintainer	Demonstration (Band selection and adaptation)



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312 POS
Pre-Clinical Pediatric Dentistry
SECOND HALF OF ACADEMIC YEAR 2015G [1436H]
Lecture Outline
January – May 2015
Thursday, 8:00 – 9:00 am

Course Director : **Dr. Zain Z. Hafiz [GUC]**
 Course Contributors : Dr. Al-Jobair, Dr. Al-Hammad, Dr. Al-Essa, Dr. Allam, Dr. Al-Mutairi, Dr. Al-Homaidhi, Dr. Al-Howaish, Dr. Azizalrahman

Week	Date	Topic	Lecturer
1	29 January	Introduction and course requirements	Dr. Hafiz
2	5 February	Development and morphology of the primary teeth <i>(McDonald, Ch. 4)</i>	Dr. Azizalrahman
3	12 February	Restorative Dentistry for the Primary Dentition I (CI I, CI II) <i>(Pinkham, Ch. 21)</i>	Dr. Al-Jobair
4	19 February	Restorative Dentistry for the Primary Dentition II (CI III, CI V) <i>(Pinkham, Ch. 21)</i> Use of rubber dam in pediatric restorative dentistry <i>(Pinkham, Ch. 21)</i>	Dr. Hafiz
5	26 February	Dental caries in the child and adolescent <i>(McDonald, Ch. 10)</i>	Dr. Allam
6	5 March	Prevention of dental disease <i>(Pinkham, Ch. 14)</i>	Dr. Al-Essa
7	12 March	MID-TERM EXAMINATION	Dr. Hafiz
8	19 March	Restorative Dentistry for the Primary Dentition III (SSC and strip crowns) <i>(Pinkham, Ch. 21)</i>	Dr. Al-Howaish
9		22-28 MARCH 2015 MID-SEMESTER BREAK	
10	2 April	Space maintenance in the primary dentition <i>(Pinkham, Ch. 25)</i>	Dr. Al-Homaidhi
11	9 April	Pulp therapy for the primary dentition <i>(Pinkham, Ch. 22)</i>	Dr. Hafiz
12	16 April	Oral Habits	Dr. Al-Hammad
13	23 April	Pain perception control <i>(Pinkham, Ch. 7 and Ch. 28)</i>	Dr. Al-Mutairi
14	30 April	Examination of the mouth and other relevant structures <i>(McDonald, Ch. 1)</i>	Dr. Al-Dabaan
15	7 May	Revision	Dr. Hafiz



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312 POS
Pre-Clinical Pediatric Dentistry
SECOND HALF OF ACADEMIC YEAR 2015G [1436H]
Laboratory Procedures
January –May 2015
Thursday, 9:00 – 11:30 am, Phantom Lab

Course Director: **Dr. Zain Z. Hafiz [GUC]**

Course Contributors : Dr. Al-Jobair, Dr. Al-Hammad, Dr. Al-Essa, Dr. Allam, Dr. Al-Mutairi, Dr. Al-Homaidhi, Dr. Al-Howaish, Dr. Azizalrahman

Date	Topic	Project
29 January	Introduction	Tooth identification system
5 February	Class I cavity preparation	Occ. # 54, # 84
12 February	Modified class I prep. & Class II cavity prep.	OL # 55, MO # 55
19 February	Class II cavity preparation	MO # 85, DO # 74
26 February	Forming and placing T-band matrix Make up session	OL # 55, OD # 74, MO # 85
5 March	Stainless Steel Crown (SSC) preparation	# 75
12 March	Strip Crown Preparation	# 61
19 March	MID-TERM EXAMINATION	TO BE ASSIGNED
	21–29 MARCH 2013 MID-SEMESTER BREAK	
2 April	SSC fitting and adaptation, restoration of strip crown preparation	# 75, #61
9 April	Pulpotomy	Ext. primary molar
16 April	Band selection, adaptation and impression for space maintainer	# 85 → # 83
23 April	Topical fluoride application and extraction techniques in children.	#55, #74, #85
30 April	Make up session	Incomplete projects

7 May	FINAL EXAMINATION / SPOT EXAMINATION	To be assigned
14 May	Course evaluation	



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Week 1: Lecture
INTRODUCTION AND COURSE REQUIREMENTS

Course description, Course objectives, Text books, Attendance, Grading Criteria, Didactic and laboratory projects outline.

Week 2: Lecture
DEVELOPMENT AND MORPHOLOGY OF THE PRIMARY TEETH
(McDonald, Chapter 4, page 52)

Life cycle of the tooth. Early development and calcification of anterior primary teeth. Early development and calcification of posterior primary teeth and the first permanent molar. Morphology of individual primary teeth. Morphologic differences between primary and permanent teeth. Size and morphology of the primary tooth pulp chamber.

Week 3: Lecture
RESTORATIVE DENTISTRY FOR THE PRIMARY DENTITION I (CI I, CI II)
(Pinkham, Chapter 21, page 313)

Restoration of primary molars. Composite resin restorations.

Week 4: Lecture
RESTORATIVE DENTISTRY FOR THE PRIMARY DENTITION I (CI III, CI V)
(Pinkham, Chapter 21, page 331)

Restoration of primary incisors and canines. Indications for restoration of primary incisors and canines, class III resin restorations. Class V restorations for incisors and canines.

USE OF RUBBER DAM IN PEDIATRIC RESTORATIVE DENTISTRY
(Pinkham, Chapter 21, page 311)

Advantages for use of rubber dam (RD). Contraindication for use of RD. Preparing and placement of the RD. Removing the RD.

Week 5: Lecture
DENTAL CARIES IN THE CHILD AND ADOLESCENT
(McDonald, Chapter 10, page 209)

Caries prevalence in preschool children. Caries prevalence in school children. Theories of the cause of dental caries. Caries in the primary, mixed and young permanent dentition. Secondary factors in dental caries. Rampant dental caries. Nursing caries.

Week 6: Lecture
PREVENTION OF DENTAL DISEASE
(Pinkham, Chapter 14, page 195)

Prenatal counseling. Fluoride administration – Rationale, mechanism of action. Systemic fluorides, topical fluorides safety and toxicity. Diet. House care. Non-nutritive sucking.

Week 7: MID-Term Examination

Week 8: Lecture
RESTORATIVE DENTISTRY FOR THE PRIMARY DENTITION III
(Pinkham, Chapter 2)

Use of stainless steel crown (SSC). Types and indications for use of SSC. Steps of preparation and placement of SSC to primary molars. Special considerations for SSC. Placement of adjacent crowns. Preparing crowns in areas of space loss. Full coronal coverage of anterior teeth.

Week 9: MID SEMESTER BREAK

Week 10: Lecture
SPACE MAINTENANCE IN THE PRIMARY DENTITION
(Pinkham, Chapter 25, page 385)

General considerations. Appliance therapy – Band and loop, lingual arch, distal shoe, removable appliances.

Week 11: Lecture
PULP THERAPY FOR THE PRIMARY DENTITION
(Pinkham, Chapter 22, page 341)

Histology of pulp-dentine complex. Reactions to dental caries. Reactions to operative procedures. Clinical pulpal diagnosis. Pulp treatment procedures – conservative treatment, radical treatment. Root filling materials.

Week 12: Lecture
ORAL HABITS

(Pinkham, Chapter 26, page 393)

Thumb and finger sucking habits. Pacifier habits. Lip habits. Tongue thrust. Mouth breathing. Bruxism nail biting. Self-mutilation.

Week 13: Lecture

PAIN PERCEPTION CONTROL (LOCAL ANESTHESIA)

(Pinkham, Chapter 7, page 85; Chapter 28, page 411)

Mechanisms of action. Local anesthetic properties. Local anesthesia in children. Topical anesthesia. General considerations for local anesthesia. Maxillary primary and permanent molar anesthesia. Maxillary primary and permanent incisor and canine anesthesia. Palatal tissue anesthesia. Mandibular anesthesia. Complications of local anesthesia.

Week 14: Lecture

EXAMINATION OF THE MOUTH AND OTHER RELEVANT STRUCTURES

(McDonald, Chapter 1, page 1)

The diagnostic method. Periodicity of examination, preventive dental services and oral treatment for children. History form and contents.