

**KING SAUD UNIVERSITY
COLLEGE OF DENTISTRY**

**DEPARTMENT OF RESTORATIVE
DENTAL SCIENCES**



Academic Year: **1436-1437H (2015-2016G)**

COURSE MANUAL

Simulated Patient by Phantom/Typodont/Laboratory

Course Director(s)

Dr. Thamer Al-Mohareb (DUC)

Dr. Yousra Al Jazairy (GUC)

Course Co-Director(s)

Dr. Mohammad AlRefeai (DUC)

Summary of the objective RDS213

Operative Division staff in the course RDS 213 must create learning environments that promote critical thinking, decision making and transfer of knowledge from didactic to clinical settings in order to enhance the knowledge, skills and performance of their students.

Students need to acquire a full range of highly precise manual and technical skills, including excellent hand/eye coordination, to enable them to visualize and understand how to undertake complex tasks such as placing complex restorations. Dental Students must be fully prepared for clinical practice at the time of finishing pre clinic course.



213 RDS

Dr. Al-Fawaz (DUC)

Dr. Al Mousa (MUC)

COURSE DESCRIPTION

This course consists of two main components:

1. The principles of cavity preparations for the currently available restorative materials and their physical and manipulative characteristics.
2. Different techniques and procedures to restore the cavity preparations.

The course is provided by the RDS department during the two semesters of the second year of the RDS program.

The RDS 213 is a six credit hours course, 3 credit hours for each semester (1+2+0).

This module will provide students with an overview of the Operative Dentistry procedures, their organization, the different kinds of restorative materials that will be used and the types of testing and grading procedures employed.

This course is critically important for the students' future as practitioners as it prepares the student to provide the major portion of dental care to his patients.

The RDS 213 course is a combination of lectures and lab exercises, representing different restorative procedures in Operative Dentistry.

All lectures, instructional procedures and materials have been designed to help student developing the knowledge, skills and judgment necessary to achieve the learning objective of Operative Dentistry Program.

The development and exercise of integrity is as essential to your competency in dental care as in the development of your knowledge and skills.

COURSE LEARNING OBJECTIVES

After successfully completing this course the students should be able to:

1. Describe the principles of cavity preparations for the currently available restorative materials. *1.4*
2. List the physical characteristics of the currently used restorative materials. *1.4*
3. Demonstrate the uses and handling of dental materials, instruments and equipment during the tooth preparation for restorative dental treatment. *5.1, 5.2*
4. Match the various restoring techniques with different cavity preparations. *1.4*
5. Prepare the tooth according to the universally accepted guidelines. *2.1*
6. Demonstrate good time management skills during practical sessions. *3.3*

Intended Learning Outcomes (ILOs) Teaching Content , Teaching Strategies and Assessments

Intended Learning outcomes

a. Knowledge
At the end of this course the student should be able to: a.1 Define the principles of cavity preparations for the currently available restorative materials. <i>1.4</i> a.2 Describe the physical characteristics of the currently used adhesive and restorative materials. <i>1.4</i> a.3 List various techniques used to restore different cavity preparations. <i>1.4</i>
(i) Teaching strategies to be used to develop that knowledge • Lectures • Tutorials • Practical sessions
(ii) Methods of assessment of knowledge acquired: • Multiple choice questions and short notes.

b. Cognitive Skills

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

- b.1 Analyse and formulate decisions in restorative dentistry. **2.2**
- b.2 Match the concept of integration of carious lesions with cavity preparation design. **2.2**
- b.3 Differentiate between various dental materials. **2.3**

(i) Teaching strategies to be used to develop these cognitive skills

- Lectures
- Practical sessions
- Tutorials

(ii) Methods of assessment of students cognitive skills

- MCQs and short notes
- Timed practical exercises
- Viva exam

c. Interpersonal Skills and Responsibility

(i) At the end of this course the student should be able to:

- c.1 Demonstrate good time management skills during practical sessions. **3.3**

(ii) Teaching strategies to be used to develop these skills and abilities

- Practical sessions

(ii) Methods of assessment of students interpersonal skills and capacity to carry responsibility

- Close supervision
- Continuous feedback from the students and contributors
- Log book

e. Psychomotor Skills (if applicable)

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

- e.1 Demonstrate patient- operator positioning . [5.1](#)
- e.2 Demonstrate different restorative dentistry techniques. [5.1, 5.3](#)
- e.3 Prepare Different cavity designs for both amalgam and tooth colored restorations. [5.1, 5.3](#)
- e.4 Manipulate different bases and liners. [5.1, 5.3](#)

(i) Teaching strategies to be used to develop these skills

- Practical sessions:
 - Demonstrations

(ii) Methods of assessment of students psychomotor skills:

- [Continuous practical assessment](#)
- [Timed exercises](#)
- [Final practical exams](#)

Evaluation System (out of 10.0)

- Unacceptable: < 6.0(Exercise should be repeated for re-evaluation)
- Acceptable: ≥ 6.0 to 7.0
- Good: ≥7.0 to 8.0
- Very Good : ≥ 8.0 to 9.0
- Excellent: ≥ 9.0 to 9.5
- Outstanding : ≥ 9.5

COURSE ORGANISATION

There are two basic parts to this course: class lectures and laboratory sessions

I. CLASS LECTURES

Most of the knowledge that the student will be required to learn will be presented through a variety of formal lectures.

The knowledge presented in the course will be structured to help the student understand the reasons behind the procedures used. The course will also teach the basic knowledge needed to perform operative procedures.

Two continuous assessment exams during this year will be held in different topics.

There will also be mid-year and final examinations.

These exams are geared to the course objectives and are designed to determine the level of the knowledge gained by the students and their progression toward achievement of the objectives.

These testing procedures form the base for the student's grade in Operative Dentistry and are weighted according to their importance.

REQUIRED READING:

- Sturdevant's Art and Science of Operative Dentistry, 5th edition 2006

- Baum, Phillips and Lund. Textbook of Operative Dentistry, 3rd edition 1995.

- Pickard's Manual of Operative Dentistry 9th edition 2011.

- Schwartz et al. Fundamentals of Operative Dentistry- A contemporary approach, 3rd edition 2006.

- Hand-outs (if needed).

II. **LABORATORY EXERCISES**

Aim of Practical course:

The aim of this course is shifting the emphasis from amalgam to resin composite restorations

It is important to remember that students must be taught the proper techniques for placing composite materials, including proper isolation, wedging, incremental placement, curing and finishing. The laboratory phase of the course is a very important component of your training in Operative Dentistry.

Practical exercises will help students develop skills in Operative Dentistry procedures.

All of the practiced tasks in the laboratory must be performed according to specific criteria taught during lectures.

The student must read about the given theoretical part of the project (the lecture) before attending the laboratory session so they can apply and practice what they have learned in the lecture. This will help in better understanding and absorption of the knowledge and effectively combine theory with intensive practice. The instructor will ask the students individually as an oral assessment and that will affect the student evaluation.

Each exercise must be turned in first for evaluation and finally for grading to the appropriate group instructor.

As students practice each of the tasks assigned in the laboratory, they will increase their skills and ways of developing competency.

- ***Remediation***

Unacceptable projects must be remediated to an acceptable level by the way of repetition or further exercises assigned by the Course Director or the Co-Director.

- ***Independent Timed-Exercises***

- After considerable practice, each student will be tested on the performance of a sequence of procedure.
- There will be **5 practical exams** (timed exercises) during the academic year **and a final practical exam** at the end of academic year.
- ***Taking the five timed practical exams is a requirement for the final exam.***

GRADING AND EXAMINATIONS:

GRADING

95 - 100	=	A+	75 - 79	=	C+
90 - 94	=	A	70 - 74	=	C
85 - 89	=	B+	65 - 69	=	D+
80 - 84	=	B	60 - 64	=	D
			Below 60	=	F

EXAMINATIONS

5. Schedule of Assessment Tasks for Students During the Semester			
Assessment	Assessment task (e.g. essay, test, group project, examination etc.)	Week due	Proportion of Final Assessment
1	First continuous assessment exam theory	(First semester)	5
2	Second continuous assessment exam theory	(Second/First semester)	5
3	Third continuous assessment exam theory	Second semester	5
4	Weekly practical projects (2semester)	Every week	20
5	First Timed-exercise	1. First semester	4
6	Second Timed-exercise	2. First semester	4
7	Third Timed-exercise	3. Second semester	4
8	Fourth Timed-exercise	4. Second semester	4
9	Fifth Timed-exercise	5. Second semester	4
10	Attitudes, Discipline and Behavior	(Second/First semester)	5
Part B 11	Final written exam	To be announced	20
Part B 12	Final practical exam	Second semester	10
Part B 13	Viva exam (Objective)	The end of the year	10

EVALUATION:

All cavity preparations and restorations listed on the progress sheet will be approved and graded by the designed instructor according to a Point-Based System

Criteria based on the Point-Based System (out of 10.0)

*Unacceptable	=	< 6.0
Acceptable	=	≥ 6.0 to 7.0
Good	=	≥ 7.0 to 8.0
Very Good	=	≥ 8.0 to 9.0
Excellent	=	≥ 9.0 to 9.5
Outstanding	=	≥ 9.5

* Exercise must be repeated for re-evaluation.

- All timed practical exercises must be completed during assigned laboratory periods.
- Any redo or missed exercise without genuine excuse will be evaluated ***out of 5.0***.
- If the student exceeded three absences without genuine excuse, any redo or missed exercise will not be evaluated and student will receive ***zero*** grade in that particular exercise.
- Redo or missed exercise due to difficulties in finishing the project in the given time limit or due to absence with genuine excuse will be evaluated ***out of 8.0***.
- Students are required to successfully finish all timed practical exercises for each topic/project in order to perform the timed practical exam.

GRADING CRITERIA STATEMENT

The following criteria will be used in evaluating student's lab work:

- 1) ATTENDANCE: All students are expected to be in the lab during those sessions designated for unit laboratory.
 - a. Attendance will be taken at the beginning of each session.

- b. Completion of all projects is a requirement for lab exams.
- 2) PREPARATION CRITERIA: Each exercise must be turned in for evaluation at a designated period of time. During the exercise times students are encouraged to communicate with their group instructor for a preliminary evaluation and guidance to be able to correct the mistakes or to do it over.
- 3) The followings will be considered as basis for ***failure***:
- a. Adjacent teeth damaged during preparation.
 - b. Project tooth or adjacent teeth removed during the preparation.
 - c. Over-preparation or under-preparation of teeth which would result in:
 - i. Inability to restore the cavity preparation effectively with the material for which the preparation was intended.
 - ii. Any damage to the tooth which, in actual clinical practice, would result in the necessity to perform a dramatic change in operative treatment plan.
 - d. Preparation partially or entirely done by any individual other than the student who is submitting the work.
 - e. The whole Typodont or opposing jaw model is not in place. Both upper and lower jaw models must be mounted inside the phantom head mouth
 - f. If the student failed to attend a minimum of **75%** of the total number of the lectures **OR** the total number of the practical sessions.
- Project may be done if missed, with genuine excuse, during one's own time or as guided by the Course Director or the Co- Director.
 - Written examinations will be based on the lecture materials, reading assignments, and information given during lab sessions.
 - Examination may be re-taken with a genuine excuse ***and*** permission from the “Academic Affairs”.
 - The laboratory evaluation will be recorded each session on the student's individual progress sheets.

OTHER REQUIREMENTS:

Class representative will be responsible for distributing any material handed by the Course Director, Co-Director, or contributors.

“Personal hygiene and safety measures must be taken by each student”

During the practical sessions student **MUST** wear:

- a. Light-blue scrub suit
- b. Clean lab coat
- c. Disposable gloves & mask (especially if working on natural teeth)
- d. Protective face shield
- e. Name tag

Each student should purchase the following items:

1. Pencil
2. Extra-fine permanent markers
3. Protective face shield
4. Name tag

Students will be required to provide the following extracted natural teeth:

- 4 molars (upper or lower)
- 4 anteriors (upper or lower)

Assigned group supervisor will give precise instructions to the students for mounting teeth.

RESPONSIBILITIES

Instructor Responsibilities

- 1) Providing a course manual and syllabus that adequately direct student activities,
- 2) The course director, co-director and contributor (instructors) should be present for the duration of all labs for the course.
- 3) Instructors (Contributor) should be assigned to specific groups of students in the preclinical lab.
- 4) Instructor (Contributor) assignments to students should rotate among the students over the term if at all possible.
- 5) Instructors (Contributor) should be periodically oriented about the nature of the daily projects, due dates, the approach(es) to be used, instrumentation or materials to be used, issues about grading, and their assigned students.
- 6) Absences or early departures should be approved by the course Director or Co Director.

Student Responsibilities:

In preclinical courses, students have the following responsibilities:

- 1) Preparing themselves appropriately before a laboratory session to maximize their use of the session and achieve as much as possible during the session.
- 2) Attending lectures and taking active measures (i.e., note taking during class) to understand the preclinical assignments, techniques being presented.
- 3) Paying close attention to demonstrations (class-wide or in groups), taking notes, avoiding distractive behavior, and asking questions to maximize the efforts of the instructor.
- 4) Using preclinical time completely and efficiently.
- 5) Recognizing and acknowledging weaknesses or poor performance and using extra practice outside of class to improve themselves.
- 6) Behaving professionally, including appropriate dress, use of safety equipment, and response to feedback from instructors.
- 7) Using preclinical time for the current course only, unless given specific permission to do otherwise.
- 8) Reading and following the course syllabus and manual and policies.
- 9) Appropriate use of labs, lab equipment, and maintaining lab work area in clean condition while in the lab, and upon leaving.

LECTURES OUTLINE *Academic Year 2015-2016*

First Semester

Course Director: Dr. Thamer Al-Mohareb, Co-Director: Dr. Mohammad AlRefeai

WEEK	DATE	LECTURE TOPIC	LECTURER
1	Aug-24-2015	-Introduction to the Course	Dr. Almohareb Dr. Alrefeai
2	Aug-31-2015	Isolation and Control of the Operating Field	Dr. Almohareb
3	Sept-07-2015	Principles of Tooth Preparation for Amalgam Restorations Class I Amalgam Cavity Preparation	Dr. Almohareb
4	Sept-14-2015	Restoration of Class I and Amalgam / Finishing and Polishing of Amalgam Restorations	Dr. Almohareb
HAJJ VACATION			
5	Oct-5-2015	Class II Amalgam Cavity Preparation	Dr. M. Al-Qahtani
6	Oct-12-2015	Dental Matrices: Definition, Uses, Requirements, Types and Applications	Dr. Alrefeai
7	Oct-19-2015	Restoration of Class II preparation with Amalgam, Finishing and Polishing of the Restoration	Dr. M. Al-Qahtani
8	Oct-26-2015	Composite Resin Materials Part I: History, Composition, Type, Advantages, Disadvantages, Indications & Contraindications	Dr. Almohareb
9	Nov-2-2015	Principles of Tooth Preparation for Composite Resin Restoration Class III Composite Resin Cavity Preparation	Dr. Ali
10	Nov-9-2015	1st Continuous Assessment	Dr. Thamer Dr. Alrefeai
11	Nov-16-2015	Class IV, V Composite Resin Cavity Preparations	Dr. Ali
12	Nov-23-2015	Composite Resin Materials Part II: Etching, Bonding, and Restorative Procedures	Dr. Almohareb
13	Nov-30-2015	Pit and Fissures Sealants, Preventive Resin Restorations and Minimal Posterior Composite Restorations	Dr. Almohareb
14	Dec-07-2015	Direct Posterior Composite Restorations	Dr. Almohareb

15	Dec-14-2015	Revision	Dr. Al-Mohareb Dr. Alrefeai
		Mid Year Vacation	

Second Semester

WEEK	DATE	LECTURE TOPIC	LECTURER
1	Jan-18-2016	Resin hybrids materials GIC	Dr. Abdullah
2	Jan-25-2016	RMGIC, Compomer, smart materials	Dr. Abdullah
3	Feb-01-2016	Pulp Protection by the Use of Insulating Bases and Liners 1	Dr. Fahad
4	Feb-08-2016	Pulp Protection by the Use of Insulating Bases and Liners 2	Dr.Fahad
5	Feb -15- 2016	Introduction to the Complex Amalgam Restoration, Pin-retained Complex Amalgam Cavity Preparation	Dr. S. Al-Shethri
6	Feb-22-2016	Pinless-retained Complex Amalgam Preparation, Restorative Technique of Complex Amalgam Restoration	Dr. S. Al-Shethri
	Feb-29-2016	2nd Continuous Assessment	Dr. Yasser Dr.Thamer
7	Mar-07-2016	Principles of Tooth Preparation for Cast Gold Restorations	Dr. Alrefeai
		Mid 2nd Semester Break	
8	Mar-21-2016	Tooth Preparation for Cast Gold Inlay and Onlay Restorations	Dr. Alrefeai
9	Mar-28-2016	Provisional Restoration	Dr. Alrefeai
10	Apr-04-2016	Indirect Posterior Esthetic Restorations I	Dr. Yasser
11	Apr-11-2016	Indirect Posterior Esthetic Restorations II	Dr. Yasser
12	Apr-18-2016	Failure of Composite and Amalgam Restoration	Dr. Thamer
13	Apr-25-2016	Biological Influence of Restorative Procedures and Materials	Dr. Thamer
14	May-02-2016	Revision	Dr. Almohareb Dr. Alrefeai
		FINAL EXAMINATIONS PERIOD	

Lab Projects

WEEK	SESSION	DATE	PRACTICAL EXERCISES
1	1	Sept. 1, 2014	Introduction to the Course, Distribution of Instruments <i>[Mounting of Plastic Teeth]</i>
	2	Sept.3, 2014	<i>Demonstration:</i> Seating Positions, Rotary and Hand Cutting Instruments, Introduction to Instrumentation on Ivorine Teeth, Rubber Dam Application on Mandibular Teeth, <i>[Mounting of Plastic Teeth]</i>
2	3	Sept.8, 2014	Cutting on Plastic Teeth by using Rotary and Hand Cutting Instruments <i>[Mounting of Natural Teeth]</i>
	4	Sept. 10, 2014	<i>Demonstration:</i> Cutting on Natural Teeth by using Rotary and Hand Cutting Instruments
3	5	Sept. 15, 2014	<i>Demonstration:</i> Class I (Occlusal & Buccal Pit) Amalgam Cavity Preparation on #46
	6	Sept. 17, 2014	Continuation in the previous project
4	7	Sept. 22, 2014	<i>Demonstration:</i> Class I Occlusal Amalgam Cavity Preparation on #24
	8	Sept. 24, 2014	Class I Occlusal Amalgam Cavity Preparation on #44
5	9	Oct. 13, 2014	<i>Demonstration:</i> Class I Occlusal Amalgam Restoration on #46
	10	Oct. 15, 2014	Class I (Occlusal) Amalgam Restorations on #24, 44
6	11	Oct. 20, 2014	Ist PRACTICAL EXAM (Class I Amalgam)
	12	Oct. 22, 2014	<i>Demonstration:</i> Class II (MO) Amalgam Cavity Preparation on #36
7	13	Oct. 27, 2014	Continuation in the previous project
	14	Oct. 29, 2014	Class II (MO) Amalgam Cavity Preparation on #15

8	15	Nov. 3, 2014	Class II (MOD) Amalgam Cavity Preparation on #45
	16	Nov. 5, 2014	<i>Demonstration:</i> Class II (MO-OL) Amalgam Preparation on #16
9	17	Nov. 10, 2014	Continuation in the previous project
	18	Nov. 12, 2014	<i>Demonstration:</i> Matrix Formation and Placement & Amalgam Restorations on # 36 (MO)
10	19	Nov. 17, 2014	Matrix Placement Amalgam Restorations on #45 (Class II MOD)
	20	Nov. 19, 2014	<i>Demonstration:</i> Double Matrix Formation and Placement & Amalgam Restoration on #16 (MO-OL),
11	21	Nov. 24, 2014	Matrix Placement & Amalgam Restoration on # 15 (MO)
	22	Nov. 26, 2014	<i>Demonstration:</i> Finishing and Polishing of Amalgam Restorations on (#46, #24 Class I Occlusal & #44). <i>[Mounting of Natural Teeth]</i>
12	23	Dec. 1, 2014	Finishing and polishing of Class II Amalgam Restorations on #36 & #16, #15, #45 <i>[Mounting of Natural Teeth]</i>
	24	Dec. 3, 2014	2nd PRACTICAL EXAM (Class II Amalgam)
13	25	Dec. 8, 2014	<i>Demonstration:</i> Class III Mesial (Lingual Approach) Cavity Preparation for Composite Resin on #11
	26	Dec. 10, 2014	<i>Demonstration:</i> Composite Resin Restorations of Class III Cavity Preparation on #11
14	27	Dec. 15, 2014	Class III Composite Resin Preparation & Restorations on Natural Tooth
	28	Dec. 17, 2014	<i>Demonstration:</i> Class IV Distal (Caries) and Mesial (Traumatic) Cavity Preparations for Composite Resin on #21
15	29	Dec. 22, 2014	Class II Amalgam Preparation & Restoration on Natural Tooth
	30	Dec. 24, 2014	

WEEK	SESSION	DATE	PRACTICAL EXERCISES
1	1	Jan. 26, 2015	<i>Demonstration:</i> Composite Resin Restorations of Class IV Cavity Preparations on #21.
	2	Jan. 28, 2015	Continuation in the previous project
2	3	Feb. 2, 2015	<i>Demonstration:</i> Class V Facial Cavity Preparation and Composite Resin Restoration on #13
	4	Feb. 4, 2015	3rd PRACTICAL EXAM (Class III Composite Resin)
3	5	Feb. 9, 2015	<i>Demonstration:</i> Class V Cavity Preparation and Restoration for GIC on #15.
	6	Feb. 11, 2015	<i>Demonstration:</i> Class V Facial Cavity Preparation and Composite Resin Restoration on #23 (closed sandwich technique)
4	7	Feb. 16, 2015	<i>Demonstration:</i> Fissure Sealants, PRR on #17 & Class I Cavity Preparation for Composite Resin #14
	8	Feb. 18, 2015	<i>Demonstration:</i> Class II (MOD) Posterior Composite Cavity Preparation & Restoration of #46 (Conventional)
5	9	Feb. 23, 2015	Continuation in the previous project, <i>[Mounting of Natural Teeth]</i>
	10	Feb. 25, 2015	<i>Demonstration:</i> Class II (MO) Posterior Composite Cavity Preparation & Restoration of #35 (Conservative) <i>[Mounting of Natural Teeth]</i>
6	11	Mar. 2, 2015	Class II Composite Preparation & Restoration on Natural Tooth.
	12	Mar. 4, 2015	4th PRACTICAL EXAM (Class II Composite Resin)
7	13	Mar. 9, 2015	<i>Demonstration:</i> Application of Bases and Liners, & Temporary Restoration on Natural Teeth
	14	Mar. 11, 2015	Continuation in the previous project

WEEK	SESSION	DATE	PRACTICAL EXERCISES
8	15	Mar 16, 2015	<i>Demonstration:</i> Class II (MOD) Amalgam Cavity Preparation on #36 with (MB) Cusp Removal and (DL) Cusp Reduction
	16	Mar. 18, 2015	Continuation in the previous project
			Mid 2 nd semester break
9	17	Mar. 30, 2015	<i>Demonstration:</i> Slot and Pins Application
	18	Apr. 1, 2015	<i>Demonstration:</i> Copper Band Placement and Amalgam Build up Restoration on #36
10	19	Apr. 6, 2015	Continuation in the previous project
	20	Apr. 8, 2015	Catch up + Finishing and polishing of the Amalgam Build up Restoration on #36
11	21	Apr. 13, 2015	5th PRACTICAL EXAM (Complex Amalgam)
	22	Apr. 15, 2015	5th PRACTICAL EXAM (Complex Amalgam)
12	23	Apr. 20, 2015	<i>Demonstration:</i> Class II (MOD) Inlay Preparation for Cast Gold Alloy on #46
	24	Apr. 22, 2015	Continuation in the previous project
13	25	Apr. 27, 2015	<i>Demonstration:</i> Onlay Preparation for Cast Gold Alloy on #46
	26	Apr. 29, 2015	Continuation in the previous project
14	27	May 4, 2015	<i>Demonstration:</i> Inlay Preparation for Esthetic Restoration on #25
	28	May 6, 2015	Class II Box (DO) Cavity Preparation for GIC/Composite Resin Sandwich Restoration & Restoration #26.
15	29	May 11, 2015	Class II (MO) Amalgam Cavity Preparation with Buccal Extension & Restoration on #47 Catch-Up and Review
	30	May. 13, 2014	FINAL PRACTICAL EXAMINATION

Description of Lectures Content - First Semester

NO.	TITLE	CONTENTS	REQ. READING
1	Introduction to the course	<ol style="list-style-type: none"> 1. Attendance checking and assigning Student leader 2. Course description 3. Course requirements and policies 4. Ergonomics 	<p>Course syllabus</p> <p>Handout</p>
2	Isolation and control of the operating field	<ol style="list-style-type: none"> 1. Goals of isolation 2. Rubber dam isolation. <ol style="list-style-type: none"> a. Advantages and Disadvantages b. Materials and instruments c. Hole size position and position d. Placement step by step 3. Removal of rubber dam 4. Alternative and additional methods and factors 5. Other isolation techniques 	<p>** Sturdevant's Art and Science of Operative Dentistry, 5th edition 2006.</p> <p>Pages 463 - 491</p>
3	Class I Amalgam cavity preparation	<ol style="list-style-type: none"> 1. Introduction of amalgam restoration 2. General considerations 3. Sequence of preparation 4. Different designs 	<p>** Textbook of Operative Dentistry, 3rd edition. Baum, Phillips & Lund Pages 295- 304</p> <p>** Sturdevant's Art and Science of Operative Dentistry, 5th edition 2006. Pages 711- 720 728- 729 731-734</p>
5	Why Restore Teeth?	<ol style="list-style-type: none"> 1. Dental caries process, types and diagnosis 2. Preventive treatment 3. Operative treatment 4. Define tooth wear, types, management 	<p>** Pickard's Manual of Operative Dentistry, 9th edition. Banerjee and Watson, 2011.</p> <p>Pages 1-9 43-49 72-75</p>
6	Restoration of Class I with amalgam / Finishing and Polishing	<ol style="list-style-type: none"> 1. Amalgam alloy: contents, proportions, setting, physical properties, marginal deterioration, and amalgamation. 2. Placement of amalgam in the cavity. 3. Restorative Technique. 	<p>** Textbook of Operative Dentistry, 3rd edition Baum, Phillips & Lund Pages 364-375</p> <p>** Fundamentals of Operative Dentistry by Schwartz et al., 3rd ed.</p>

		4. Finishing and polishing.	Pages 374 - 380 388 - 389 ** Sturdevant's Art and Science of Operative Dentistry, 5 th edition 2006. Pages 720-736
7	Class II Amalgam Cavity preparation	1. General considerations 2. The incipient class II amalgam a) Outline of the cavity preparations b) Sequence of preparation 3. The extended class II amalgam a) Sequence of preparation	Textbook of Operative Dentistry, 3 rd edition Baum, Phillips & Lund Pages 304 -328
8	Dental matrices	1. Definition and types of dental matrices 2. Uses of dental matrices. 3. The ideal requirements of dental matrices. 4. To differentiate between different types of matrices. 5. To know the application of each type of these matrices and to focus on the application and removal of the universal Tofflemire matrix 6. The wooden wedges: their uses, requirements and importance	** Fundamentals of Operative Dentistry by Schwartz et al., 3 rd ed. Pages 366 -374 ** Textbook of Operative Dentistry, 3 rd edition. Baum, Phillips & Lund Pages 341 - 363
9	Amalgam Restorations of class II with amalgam finishing and polishing	1. Condensation of the amalgam restoration. 2. Carving of amalgam and carving instruments. 3. Finishing & polishing of amalgam.	** Textbook of Operative Dentistry, 3 rd edition. Baum, Phillips & Lund Pages 380 – 384 386 – 392 397 – 398 ** Sturdevant's Art and Science of Operative Dentistry, 5 th edition 2006. Pages 773-777
11	Composite Resin Material Part I: (History, Composition, Type, Advantages, Disadvantages, Indications and Contraindications)	1. Terminology and Historical development. 2. The composition and setting reactions 3. Classification 4. General considerations for composite restorations: indications, contraindications, advantages & disadvantages	**Handouts ** Sturdevant's Art and Science of Operative Dentistry, 5 th edition 2006. Pages 196-205, 500-502,504-508

12	Principles of Tooth Preparation for Composite Restoration / Class III Composite Resin Cavity Preparation	<ol style="list-style-type: none"> 1. Tooth Preparation for composite restorations. 2. Types of preparations (General considerations) 3. Tooth preparation for class III composite restorations and comparing between conventional, beveled conventional and modified preparations 4. Indications of the facial and lingual approaches and advantages of lingual one. 	<p>** Sturdevant's Art and Science of Operative Dentistry, 5th edition 2006. Pages 512-517 530-541</p>
13	Class IV, V Composite Resin Cavity Preparations	<ol style="list-style-type: none"> 1. Define Class IV and V 2. Tooth preparation for Class IV for composite restorations with different designs 3. Tooth preparation for Class V for composite restorations with different designs 	<p>** Sturdevant's Art and Science of Operative Dentistry, 5th edition 2006. Pages 550-553</p>
14	Composite Resin Material Part II: (Etching, Bonding, and Restorative Procedure).	<ol style="list-style-type: none"> 1. Preparation of operating site. 2. Shade selection. 3. Pulp protection. 4. Acid etch phenomenon. 5. Bonding to enamel and dentin 6. Restorative procedure of class III, IV, and V. 	<p>** Sturdevant's Art and Science of Operative Dentistry, 5th edition 2006. Pages 508-512 517-522 541-550 553-556 561-562</p> <p>** Fundamentals of Operative Dentistry by Schwartz et al., 3rd ed. Pages 202 – 242 275 – 285</p>
15	Pit and Fissure Sealant, Preventive Resin Restorations and Minimal Preparations for Posterior Composite	<ol style="list-style-type: none"> 1. Fissure sealant procedure. 2. Preventive Resin Restoration. 3. Tunnel preparation. 4. Class VI preparation 	<p>** Pickard's Manual of Operative Dentistry, 9th edition. Banerjee and Watson, 2011. Pages 104 – 110</p> <p>** Fundamentals of Operative Dentistry by Schwartz et al., 3rd ed. Pages 302 – 305 328 – 331</p> <p>** Sturdevant's Art and Science of Operative Dentistry, 5th edition 2006. Pages 569-574 578-581 587-593</p>

16	Direct Posterior Composite Restorations	<ol style="list-style-type: none">1. Indication and contraindications, advantages, and disadvantages of posterior composite restorations.2. Types of Class I and Class II preparations and restorative procedure for direct posterior composite restorations	** Sturdevant's Art and Science of Operative Dentistry, 5 th edition 2006. Pages: 569-571 Pages: 574-598
----	---	---	---

Description of Lectures Content - Second Semester

NO.	TITLE	CONTENTS	REQ. READING
1	Glass Ionomer Cement (Material)	<ol style="list-style-type: none"> 1. Definition. of GIC 2. Composition and chemistry 3. Setting reaction. 4. Different types. 5. Clinical manipulation 	<p>** Handout</p> <p>** Textbook of Operative Dentistry, 3rd edition. Baum, Phillips & Lund</p> <p>Pages 263 – 268</p> <p>** Sturdevant’s Art and Science of Operative Dentistry, 5th edition 2006.</p> <p>Pages 563-564</p>
2	Resin Modified Glass Ionomer and Compomers	<ol style="list-style-type: none"> 1. Differences between conventional GI, resin modified GI, and compomers. 2. Setting reaction of each type. 3. Advantages of resin modified GI over conventional type. 4. Clinical handling of these materials 5. Sandwich technique 	<p>** Handout</p> <p>** Sturdevant’s Art and Science of Operative Dentistry, 5th edition 2006.</p> <p>Page 318-319</p>
3&4	Pulp Protection by the Use of Insulating Bases and Liners	<ol style="list-style-type: none"> 1. Define liners and bases and described their desirable properties. 2. Enumerate the indications for cavity liners and bases placed under amalgam and composite resin restorations. 3. Described the reaction of the dental pulp to cavity liners and bases. 4. Described the advantages and disadvantages of various cavity liners and bases. 5. Briefly described the role of dentine adhesive systems as cavity liners. 	<p>** Fundamentals of Operative Dentistry by Schwartz et al., 3rd ed. Pages 104-112</p> <p>** Textbook of Operative Dentistry, 3rd edition. Baum, Phillips & Lund Pages 132 - 153</p>
5	Introduction to the Complex Amalgam Restoration + Pin-retained Complex Amalgam Cavity Preparation	<ol style="list-style-type: none"> 1. Indications, contraindications, advantages, and disadvantages 2. Different techniques. 3. Tooth preparation 4. Explain the different types of pins. 5. Explain the technique of placement of pins 6. Explain the problems with pins and the solutions 	<p>** Sturdevant’s Art and Science of Operative Dentistry, 5th edition 2006.</p> <p>Pages 809-831</p>
6	Pinless-retained Complex Amalgam Preparation + Restorative Technique	<ol style="list-style-type: none"> 1. Explain the additional means of retention placed in cavities such as retentive grooves, amalgapins, slots, pins, steps, circumferential slots. 	<p>** Sturdevant’s Art and Science of Operative Dentistry, 5th edition 2006.</p> <p>Pages 831-840</p>

	of Complex Amalgam Restoration	2. Restorative Technique, and using different modalities of matrices	** Fundamentals of Operative Dentistry by Schwartz et al., 3 rd ed. Pages 363-366
7	Principles of Tooth Preparation for Cast Gold Restorations	1. Definitions. 2. Classification of castings 3. Materials for cast restoration 4. Indications, contraindications, advantages and disadvantages.	** Sturdevant's Art and Science of Operative Dentistry, 5 th edition 2006. Pages 847-849 **Fundamentals of Operative Dentistry by Schwartz et al., 3 rd ed., Pages 538 - 544
8	Tooth Preparation for Cast Gold Inlays and Onlays Restorations	1. Indications for cast gold inlay 2. Difference between amalgam and inlay preparation. 3. Steps of preparation. 4. Indications for cast gold onlay. 5. Understanding the different types of finish lines. 6. Steps of preparation	** Fundamentals of Operative Dentistry by Schwartz et al., 3 rd ed. Pages 544 - 559
9	Provisional Restorations	1. Definition. 2. Requirements of provisional restoration 3. Provisional restoration materials. 4. Procedures for fabrication.	** Sturdevant's Art and Science of Operative Dentistry, 5 th edition 2006. Pages 885-890
10 & 11	Indirect Posterior Esthetic Restorations – Parts I and II	1. Resin composite inlays and onlays. 2. Advantages over direct resin composite restorations. 3. Direct resin inlays. 4. Posterior bonded porcelain restoration. 5. Resin composite vs. porcelain.	** Sturdevant's Art and Science of Operative Dentistry, 5 th edition 2006. Pages 603-619 ** Fundamentals of Operative Dentistry by Schwartz et al., 3 rd ed. Pages 519 - 527
12	Failure of Restoration (composite and Amalgam)	1. Causes of failure 2. Management of failure restoration i. Repair of old restoration ii. Repair of newly condensed amalgam restorations.	** Handout ** Pickard's Manual of Operative Dentistry, 9 th edition. Banerjee and Watson, 2011. Pages 140 - 145 149
13	Biological influence of restorative procedures and materials	1. Described the reaction of dentine-pulp complex to cavity preparation and irritants from restorative materials. 2. Described the reaction of the periodontium to restorations with cervical overhangs as well as those that interfere with	** Handouts

		<p>occlusion.</p> <p>3. Described the reaction of the oral mucosa to irritation from rough restoration surfaces and traumatic operative procedures such as placement of rubber dam clasps.</p> <p>4. List the sources of mercury exposure by man, including the exposure of dental personnel and patients with amalgam restorations.</p>	
--	--	--	--