



**Kingdom of Saudi Arabia**  
**IbnSina National College for Medical Studies in Jeddah**



**Syllabus for**  
**PRINCIPLES OF**  
**OPERATIVE DENTISTRY**  
**(CDS 211)**  
***(6 Credit Hours)***

**Year 3 – BDS**

**1435– 1436 H**  
**2014 – 2015 G**

## **WELCOME TO PRINCIPLES OF OPERATIVE DENTISTRY COURSE!**

**Dear Student,**

I would like to welcome you to the “Principles of Operative Dentistry” Course.

This syllabus will show you brief knowledge related to the subject. During lectures you will notice that we will cover only the major aspects of the subject. The practical sessions will give you the opportunity to discuss in more details aspects which are unclear to you. The included lists of references will help you find more information.

This, at the same time, means that you are required to put more effort on self-directed learning strategies. Ultimately, you should be guided to become a lifelong learner.

Being aware of the fact that students worry too much about examinations, we have made an effort to disperse the assessment over the whole period. In the section on assessment you will see the details of this process.

As a coordinator, I will be there to receive your feedback and comments and to try to resolve any difficulties during the implementation of the course. Please do not hesitate to contact me at any time if you need any help. The other staff members teaching the course are also available for any help you may need in case you have subject-related enquiries.

I wish you an enjoyable and successful experience with the Principles of Operative Dentistry Course.

**The Coordinator**

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## CURRICULUM MAP

YEAR 3																																		
SEMESTER	SEMESTER 1																SEMESTER 2																	
WEEKS	1	2	3	4	5	6	7	8*	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25*	26	27	28	29	30	31	32	33	34
<b>COURSES</b>	<b>ORAL DIAGNOSIS-I [ODG 242] 2 CR (1+0+1)</b>															END OF SEMESTER EXAM	PREVENTIVE DENTISTRY [COMD 221] 1 CR (1+0+0)																	END OF SEMESTER EXAM
																ORAL PATHOLOGY-I [OPAT 231] 2 CR (1+1+0)																		
																GENERAL MICROBIOL AND IMMUNOL [MICR 211] 3 CR (2+1+0)																		
																DENTAL PHARMACOLOGY-I [PHAR 211] 2 CR (2+0+0)																		
	2 CR	ORAL BIOLOGY [BIOL 251] 3 CR (2+1+0)															1 CR	<b>FINAL EXAM</b>																
	3 CR	PRINCIPLES OF OPERATIVE DENTISTRY [CDS 211] 6 CR (2+4+0)															3 CR																	
	1 CR	LOCAL ANESTHESIA AND EXODONTIA [OSRG 211] 2 CR (2+0+0)															1 CR																	
	2 CR	GENERAL PATHOLOGY [PATH 210] 4 CR (2+2+0)															2 CR																	
	3 CR	INTRODUCTION TO DENTURES [PROS 211] 6 CR (2+4+0)															3 CR																	
	2 CR	PHYSICS OF DIAGNOSTIC RADIOLOGY [RAD 241] 3 CR (1+0+2)															1 CR																	
<b>TOTAL 15 CR</b>																<b>TOTAL 19 CR</b>																		
* MID-SEMESTER EXAM																																		

### INTRODUCTION TO THE COURSE

“Principles of Operative Dentistry” is a continuous course that focuses on prevention, diagnosis and treatment of defects in enamel and dentin of individual teeth. This course has lectures for 1 hour and practical 3 hours every week. it introduces you to:

- Dental caries, causes, clinical features, diagnosis and treatment
- Different types of cavity preparation to restore the carious and non-carious lesions
- Restoring the integrity of the teeth with various restorative materials

The lectures will stress on steps in cavity preparation, pulp protection, hand and rotary instruments used in operative dentistry, restoring the integrity of teeth including function and esthetics by restorative materials.

In practical session, the students have to do cavity preparation and restoration on the typhodont teeth which is mounted in the phantom head.

## GENERAL OBJECTIVES OF THE COURSE

**Upon successful completion of this course, students will be able to:**

- Identify the various hand and rotary instruments used in Operative Dentistry.
- Diagnose lesions of hard tooth tissues and in particular dental caries, excavate carious lesions, and cleave unsupported enamel of mounted extracted teeth, using suitable hand instruments.
- Classify carious lesions and recognize a proximal caries on a bitewing radiograph.
- List the methods of isolation of the operative field and apply the rubber dam.
- Name the parts of prepared simple and compound cavities
- Prepare simple class I and V cavities for amalgam and manipulate rotary and hand instruments.
- Discuss the basic principles, techniques and rational of operative procedures and apply them.
- Present a step-by-step procedure for each cavity preparation and cavity restoration.
- Grasp training in different operations (cavity preparation and restoration) by doing specific standardized exercises on Typodont (Plastic) Models mounted on mannequins.
- Grasp training in these operations in a situation similar to the clinical set-up.

## COURSE CONTENTS

N.	Title	Subject	Teacher
<b>Lectures</b>			
<b>Semester I</b>			
L 1	Introduction to Operative Dentistry	Principles of Operative Dentistry	Dr. Siddiq Ahmed
L 2	Nomenclature & Dental Terminology		
L 3	Different Tooth numbering systems		
L 4	Cavity classification (Gv Blacks)		
L 5	General Principles of the cavity preparation		Dr. OlaBarakat
L 6	Class –I cavity preparation for Amalgam		Dr. AnkurDua
L 7	Class-V cavity preparation for Amalgam		Dr. Siddiq Ahmed
L 8	Instruments In operative Dentistry		Dr. AnkurDua
L 9	Instruments In Operative Dentistry		Dr. PrabuMahin
L 10	Instruments in operative dentistry		Dr. Kiran Kumar
L 11	Dental Caries		
L 12	Dental Amalgam		
L 13	Dental Amalgam		
L 14	Dental Amalgam		

<b>Semester II</b>			
<b>L 1</b>	Class-II cavity preparation for Amalgam	Principles of Operative Dentistry	Dr. OlaBarakat
<b>L 2</b>	Class-II cavity Preparation for Amalgam		
<b>L 3</b>	Amalgam Restoration		Dr. Kiran Kumar
<b>L 4</b>	Matrices		Dr. PrabuMahin
<b>L 5</b>	Pulp protection Materials		
<b>L 6</b>	Pulp Protection materials		Dr. AnkurDua
<b>L 7</b>	Composite Resin Material		
<b>L 8</b>	Composite Resin material		Dr. Ahmed Adel
<b>L 9</b>	Class-III and class-IV		
<b>L 10</b>	Glass Ionomer Cements		Dr. PrabuMahin
<b>L 11</b>	Glass Ionomer Cements		
<b>L 12</b>	Operators and patients position in operative dentistry		Dr. Siddiq Ahmed
<b>L 13</b>	Wedges		Dr. PrabuMahin
<b>L 14</b>	Finishing and Polishing of amalgam restoration		Dr. Siddiq Ahmed
<b>Practical Sessions</b>			
<b>Semester I</b>			
<b>P 1</b>	Introduction to operative dentistry	Principles of Operative Dentistry	Dr. Siddiq Ahmed Dr. AnkurDua Dr. PrabuMahin
<b>P 2</b>	Hand piece exercise – Box shape and round shape cavity preparation on 36		
<b>P 3</b>	Class I cavity for amalgam on 36 and 46		
<b>P 4</b>	Class I cavity for amalgam on 35 and 15, buccal pit on 36		
<b>P 5</b>	Class I cavity for amalgam on 37, Conservative Class I cavity for amalgam on 26		
<b>P 6</b>	Conventional class I cavity on 16, class V cavity on 36.		
<b>P 7</b>	Occlusobuccal class I on 36, occlusopalatal class I on 46		
<b>P 8</b>	Class II cavity preparation for amalgam on 36(MO)		
<b>P 9</b>	Class II cavity preparation for amalgam on 36(MOD)		
<b>P 10</b>	Class II cavity preparation for amalgam on 15(MO), 45(DO)		
<b>P 11</b>	Base application and Amalgam restoration of class I cavity on 36, 46		
<b>P 12</b>	Matrix band application and Amalgam restoration of class II cavity on 36(MO), 46(MO).		
<b>P 13</b>	Amalgam restoration of Class II cavity on 15(MO), 45(DO).		
<b>P 14</b>	Polishing and finishing of class II amalgam restorations		
<b>Semester II</b>			
<b>P 1</b>	Class I cavity for composite on 36 and composite restoration, Rubber Dam	Principles of Operative	Dr. Siddiq Ahmed Dr. AnkurDua

	Demonstration	Dentistry	Dr. PrabuMahin
<b>P 2</b>	Class I cavity for composite on 47 and composite restoration.		
<b>P 3</b>	Class I cavity for composite on 14 and 34 and composite restoration.		
<b>P 4</b>	Occlusobuccal class I cavity for composite on 46, occlusopalatal class I cavity for composite on 16.		
<b>P 5</b>	Class II cavity preparation for composite on 16 (MO), 26(DO) and composite restoration.		
<b>P 6</b>	Class II cavity preparation for composite on 46 (MO) and composite restoration		
<b>P 7</b>	Class II cavity preparation for composite on 36 (MOD) and composite restoration		
<b>P 8</b>	Class III cavity preparation for composite on 12 and 22 and composite restoration		
<b>P 9</b>	Class IV cavity preparation for composite on 11 and Composite restoration of class IV cavity		
<b>P 10</b>	Class IV cavity preparation for composite on 21 and Composite restoration of class IV cavity		
<b>P 11</b>	Class V cavity preparation on 37 and glass ionomer restoration		
<b>P 12</b>	Caries excavation on natural extracted teeth on 36 or 46, class I cavity preparation and restoration with amalgam		
<b>P 13</b>	Caries excavation on natural extracted teeth on 36 or 46, class II cavity preparation and restoration with amalgam		
<b>P 14</b>	Caries excavation on natural extracted teeth on 36 or 46, class II cavity preparation ,pulp protection and restoration with composite		

### COORDINATOR AND TEACHERS OF THE COURSE

N <sup>o</sup> .	Name	Division	Ext #	Room #	E-mail	Office Hours
<b>Coordinator and Teacher:</b>						
	Dr. SiddiqAhmed	Restorative Dentistry	358	366	<a href="mailto:siddigendo@gmail.com">siddigendo@gmail.com</a>	Thursday 1 to 4PM
<b>Teachers:</b>						
1	Dr.Jayalakshmi	Restorative Dentistry	343	247	<a href="mailto:vishwajaya@gmail.com">vishwajaya@gmail.com</a>	Tuesday 1 to 4PM
2	Dr. Ola Barakat		225	275	<a href="mailto:olarhm@hotmail.com">olarhm@hotmail.com</a>	

3	Dr. Ahmed Adel		362	365	<a href="mailto:drahmedadel@hotmail.com">drahmedadel@hotmail.com</a>	Thursday 1 to 4PM
5	Dr.Kiran Kumar		457	361	<a href="mailto:drkiranendo@gmail.com">drkiranendo@gmail.com</a>	Monday 1 to 4PM
6	Dr.AnkurDua		458	361	<a href="mailto:ankurdua@gmail.com">ankurdua@gmail.com</a>	Monday 1 to 4PM
7	Dr.PrabuMahin		360	362	<a href="mailto:mahin_1973@yahoo.com">mahin_1973@yahoo.com</a>	Monday 1 to 4PM

## LEARNING RESOURCES

### Textbooks:

- Sturdevant’s Art and Science of Operative Dentistry, 5<sup>th</sup> edition
- Craig ‘s dental restorative materials 12<sup>th</sup> edition
- Pickard’s Manual of Operative Dentistry, 7<sup>th</sup> edition

## STUDENT ASSESSMENT

### 1. Formative Assessment:

Students are encouraged to answer the oral questions in the first ten minutes time of the lectures.

### 2. Summative Assessment:

Method	Type of questions	Timing	Distribution of marks
Mid-semester 1	Written (MCQ)	8 <sup>th</sup> Week	10
End of Semester 1	Written (MCQ)	16 <sup>th</sup> and 17 <sup>th</sup> Weeks	15
Mid-semester 2	Written (MCQ)	25 <sup>th</sup> Week	10
End of Semester 2	Written (MCQ)	33 <sup>rd</sup> and 34 <sup>th</sup> Weeks	25
Competency Test (CT)	Practical		20
Minimum Procedural Experience (MPE)	Practical		20
<b>Total</b>			<b>100</b>