



Course Specifications

Course Title:	Pre-clinical operative dentistry
Course Code:	RDS 213
Program:	Bachelor of Dental Surgery (BDS)
Department:	Restorative dental sciences
College:	College of Dentistry in Alzulfi
Institution:	Majmaah University

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A. Course Identification

1. Credit hours:
2. Course type
a. University <input type="checkbox"/> College <input type="checkbox"/> Department <input type="checkbox"/> Others <input type="checkbox"/>
b. Required <input type="checkbox"/> Elective <input type="checkbox"/>
3. Level/year at which this course is offered: level 3 and level 4 & 2 nd year
4. Pre-requisites for this course (if any): 111 RDS, 122 RDS
5. Co-requisites for this course (if any): none

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	30	20%
2	Blended	NA	--
3	E-learning	NA	--
4	Correspondence	NA	--
5	Other	120	80%

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	Lecture	30
2	Laboratory/Studio	120
3	Tutorial	
4	Others (specify)	
	Total	150
Other Learning Hours*		
1	Study	--
2	Assignments	30
3	Library	--
4	Projects/Research Essays/Theses	--
5	Others(specify)	--
	Total	30

*The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

This course should help the students to understand the basics of operative dentistry, like diagnosis and management of various dental defects, cavity preparation, instrumentation and restorative procedures. This will help them in future advanced clinical training.

2. Course Main Objective

This course continues on building students' knowledge & Understanding related to the application of a systematic approach to the diagnosis & management of Dental caries and various other dental defects. In addition the students will be familiar with the operative instruments & equipments in the simulated preclinical operatory (Phantom Head lab) and learn how to use them in necessary clinical procedures. During assigned preclinical sessions, Students will apply their acquired knowledge and skills to perform various dental operative procedures in simulated conditions to prepare themselves for future clinical training.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	Knowledge:	
K3.1	To recall various procedures needed to be implemented in practicing dentistry.	K3
2	Skills :	
S3.1	To develop skills in identifying & classifying the dental diseases based on extent of involvement.	S3
S6.1	To demonstrate skills on good hand-eye coordination in treating the dental diseases.	S6
3	Competence:	
C2.1	To demonstrate reasoning and ideology based treatment among the students	C2

C. Course Content

List of Topics	Contact hours
Introduction to the course: Definition and history Factors affecting operative treatment Future of operative dentistry	1

Isolation and Control of the Operating Field: Introduction Goals of isolation Advantages Methods of isolation	1
Class I Amalgam Cavity Preparation: Outline form Convenience form Retention form Resistance form Pulp protection finishing	1
Class V Amalgam Cavity Preparation: Outline form Convenience form Retention form Resistance form Pulp protection finishing	1
Restoration of class I and Class V with Amalgam: Amalgam manipulation Restorative procedure	1
Finishing and Polishing of Amalgam Restorations: Rationale Material used Procedure	1
Class II Amalgam Cavity Preparation: Outline form Convenience form Retention form Resistance form Pulp protection finishing	1
Dental Matrices : Definition, Uses, Requirements, Types and their Application: Definition Uses Requirements Types Application	1

Restoration of Class II, Finishing & Polishing Amalgam: Restorative procedure Finishing & polishing procedure	1
Composite Resin Material Part I: History, Composition, Types, Advantages, Disadvantages, Indications and Contraindications: History Composition Types Advantages Disadvantages Indications Contraindications	1
Principles of Tooth Preparation for Composite: Introduction General considerations Clinical technique Tooth preparation Common problems: causes and potentialsolutions	1
Restoration Class III Composite Resin Cavity Preparation: Outline form Convenience form Retention form Resistance form Pulp protection finishing	1
Class IV, V Composite Resin Cavity Preparation: Outline form Convenience form Retention form Resistance form Pulp protection Finishing	1

<p>Bonding and Restorative Procedure: Chemicals used for etching Effect of etching on tooth structure Advantages of etching Different Bonding agents Restorative Procedure Finishing & polishing</p>	<p>1</p>
<p><u>2nd Semester:</u></p>	
<p>Pit and Fissure Sealant, Preventive Resin Restorations and Minimal Preparation for Posterior Composite: Introduction Types Technique Guidelines for application</p>	<p>1</p>
<p>Direct Posterior Composite Restoration: Introduction Indications Contraindication Advantages Technique Durability</p>	<p>1</p>
<p>Glass Ionomer Cement (Material): Introduction Types Composition Manipulation Fluoride release Physical properties Uses</p>	<p>1</p>

<p>Glass Ionomer Cement (Clinical Manipulation): Introduction Manipulation Clinical procedures Finishing</p>	<p>1</p>
<p>Resin Modified Glass Ionomer and Compomers: Introduction Types Composition Manipulation Fluoride release Physical properties Uses</p>	<p>1</p>
<p>Pulp Protection by the Use of Insulating Bases and Liners: Introduction Rationale for pulp protection materials Indications manipulation Functions</p>	<p>1</p>
<p>Principles of Tooth Preparation for Cast Gold Restorations: Introduction Indications Contraindications Advantages Disadvantages Clinical technique</p>	<p>1</p>

<p>Tooth Preparation for Cast Gold Inlay Restorations:</p> <p>Introduction</p> <p>Indications</p> <p>Contraindications</p> <p>Advantages</p> <p>Disadvantages</p> <p>Clinical technique</p>	<p>1</p>
<p>Tooth Preparation for Cast Gold Onlay Restorations:</p> <p>Introduction</p> <p>Indications</p> <p>Contraindications</p> <p>Advantages</p> <p>Disadvantages</p> <p>Clinical technique</p>	<p>1</p>
<p>Provisional Restorations:</p> <p>Introduction</p> <p>Indications</p> <p>Advantages</p> <p>Materials</p> <p>Clinical technique</p>	<p>1</p>
<p>Indirect Posterior Esthetic Restorations (I, II):</p> <p>Introduction</p> <p>Indications</p> <p>Contraindications</p> <p>Advantages</p> <p>Disadvantage</p> <p>Clinical technique</p>	<p>1</p>
<p>Failure of Restoration:</p> <p>Introduction</p> <p>Etiology</p> <p>Prevention</p>	<p>1</p>

Failure of restoration: Correction Management	1
Biological Influence of Restorative Procedures and Materials: Introduction Biological effects of different restorative materials Mechanism	1
Biological Influence of Restorative Procedures and Materials: Potential hazards Prevention	1

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge		
K3.1	To recollect and implement various procedures needed in practicing dentistry.	Lectures, preclinical lab sessions	<ul style="list-style-type: none"> • Pre-clinical exam • Written exam • Oral exam
2.0	Skills		
S3.1	To develop the ability in identifying dental diseases and classifying them based on extent of involvement.	Lectures, preclinical lab sessions	<ul style="list-style-type: none"> • Pre-clinical exam • Written exam • Oral exam
S6.1	To exhibit and perform procedures in treating the dental diseases	Lectures, preclinical lab sessions	<ul style="list-style-type: none"> • Pre-clinical exam • Written exam • Oral exam
3.0	Competence		
C2.1	To discuss and exhibit various treatment procedures among the dental students	Preclinical lab sessions	<ul style="list-style-type: none"> • Approved procedures documented in logbook • Preclinical exam

2. Assessment Tasks for Students

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Quiz / assignment	During the semester	5%
2	Midyear theory exam	12 th week	15 %
3	Final theory exam	25 th week	15%
4	Weekly Assessment Practical	During the semester	30%
5	Mid- Year Practical	11 th week	10%
6	Final practical exam	24 th week	25%

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

- Students will be able to see the office hours and availability of teaching staff This will be put in front of the office.
- Academic advising units for each year monitor separately and brief the students feedback accordingly

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	✓ Sturdevant,s Art and Science of Operative Dentistry , Harald O.Heymann, Edward J. Swift jr and Andre V. Ritter . Elsevier . 2012
Essential References Materials	<ul style="list-style-type: none"> ✓ Fundamentals of operative Dentistry; A contemporary Approach , James B. Summitt, J William , Robbins , Thomas J . Hilton , Richard S. .2006 ✓ Pickard,s Manual of operative Dentistry . Avijit Banerjee, Timothy F . Watson . Oxford 2011
Electronic Materials	<ul style="list-style-type: none"> • Recommended selected articles will be posted in the course webpage. • www.pubmed.com

	<ul style="list-style-type: none"> • Google • www.sciencedirect.com
Other Learning Materials	<ul style="list-style-type: none"> • Library • Computers • Projects • Diagnostic instruments

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	<ul style="list-style-type: none"> ✓ Lecture room suitable for 30 students ✓ Fully equipped dental clinics for practical sessions
Technology Resources (AV, data show, Smart Board, software, etc.)	<ul style="list-style-type: none"> ✓ Projector ✓ Smart board with all the accessories ✓ Internet
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	<ul style="list-style-type: none"> ✓ Sterilization equipment ✓ Dental clinics

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students	<ul style="list-style-type: none"> ✓ Course Evaluation Survey ✓ Quality of Exam Survey
	Faculty	<ul style="list-style-type: none"> ✓ CLO Mapping with teaching & assessment. ✓ Course Blueprinting ✓ Grade Analysis ✓ Psychometric Analysis
	Peers	Grade Verification
Extent of achievement of course learning outcomes	Faculty member / Quality assurance committee	<ul style="list-style-type: none"> ✓ Direct assessment outcome analysis ✓ Course report preparation
Quality of learning resources, etc	Students / Faculty	<ul style="list-style-type: none"> ✓ Academic advising survey ✓ Student experience survey

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	Department Council
Reference No.	-----
Date	-----

