The University of Jordan

Faculty of Dentistry

Department of Conservative Dentistry and Prosthodontics

Course Title: Conservative Dentistry 1 - Theory

Course Code: 1302315

Prerequisite: None

Course Coordinator: Dr. Sahar Taha

Year: 3rd year, first and second semesters

Credit: 2 credit hours

Prerequisite for: clinical practice of operative dentistry in the course of "Conservative Dentistry 3 – Practical"

Instructors:

Instructor	Email
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Course Objectives:

- To provide the students with knowledge and understanding of the fundamentals of Operative Dentistry necessary to be able to deal with patients that needs operative treatment in a clinical setting.
- To review the topics related to tooth anatomy, histology and principles of dental caries within the context of Operative Dentistry.
- To introduce the students to concept and principles of cavity preparation.
- To provide the students with in depth knowledge into the preparation of all types of cavities encountered in the dental practice.
- To provide the students with in depth knowledge in the restoration of all classes of dental lesions and the clinical handling of all classes of direct restoratives used in the dental practice.
- To introduce the students to the biological considerations in operative dentistry, caries detection and the management of grossly carious teeth.
- To familiarize students with the criteria for evaluating existing restorations.
- To introduce the students to the concepts of esthetic dentistry including color science and discoloration of dentition.

Learning Outcomes:

Successful completion of this module should lead to the following learning outcomes:

- Students should gain essentials of basic knowledge and understanding of the concepts, principles and theories related to Operative Dentistry.
- Students should be able to discuss and explain the interaction between tooth anatomy and histology and the process of dental caries within the context of Operative Dentistry.
- Students should be able to visualize, discuss and explain the concept and principles of cavity preparation.
- Students should be able to discuss the steps of cavity preparation for individual lesions and the relation between the preparation features and the properties and characteristics of the restorative materials and techniques employed to restore the prepared cavity.
- Students should be able to understand and appreciate the biological aspects of operative dentistry.
- Students should be able to understand and appreciate the concepts of esthetic dentistry and color science.

A. Knowledge and Understanding (student should)

- Develop a wide range of back-ground knowledge and understanding of the basic principles of Operative Dentistry and management of dental lesions.
- Have in depth knowledge in the principles and detailed features of different types of cavity preparations for metallic and tooth-colored restoratives.
- Develop wide range knowledge and understanding of the instrumentation used in Operative Dentistry and the handling techniques for the restorative materials employed.
- Be able to discuss and explain the biological aspects of operative dentistry.
- Be able to discuss and explain the concepts of esthetic dentistry and color science.

B. Intellectual skills - with ability to

- Apply the knowledge of the basic dental sciences (dental anatomy, histology and dental caries) within the context of Operative Dentistry.
- Understand and relate the properties and behavior of restorative dental materials to the concepts behind cavity preparation.
- Understand and appreciate the biological aspects of Operative Dentistry and material applications in Operative Dentistry.
- Integrate the knowledge and understanding of the esthetic needs and consideration with the properties and limitations of clinical dental material.

C. Subject specific skills – with ability to

- Classify different classes of carious and non-carious lesions and explain in details the principles of cavity preparation and the specific features of all types of cavity preparations for metallic and tooth-colored restoratives.
- Identify and explain the uses of instruments used in Operative Dentistry.
- Select and explain the principles for handling various restorative dental materials in the restoration of the prepared cavities.
- To discuss and explain the biological aspects of operative dentistry.
- To discuss and explain the concepts of esthetic dentistry and color science.

D. Transferable skills – with ability to

- Utilize the modern sources of information such as the internet and data basis to develop and update the knowledge in the field of Conservative Dentistry.
- Appreciate the importance of clinical and laboratory based research in the development of new categories of restorative dental materials.
- Understand the importance of Operative Dentistry as a part of an integrated treatment plan that cover the dental needs of a patient and the importance of consultation with other specialties, referral and team work.

Teaching methods:

- Duration*:* 32 weeks in 1st and 2nd semesters (3rd year), 32 hours in total
- Lectures*:* 28 hours, 1 per week (including two 1-hour 1st and 2nd exams and one 2-hours final exam)

Modes of assessment:

- First exam: 25 points, MCQs
- Second exam: 25 points, MCQs
- Final Exam: 50 points, MCQs

Attendance policy:

Lecture attendance is obligatory. The handout and recommended textbook are not comprehensive and additional material will be covered in lectures. You are responsible for all material covered in lectures. However, 15% allowed absence is granted for students by the university law.

Expected workload:

On average you should expect to spend between 2 to 3 hours per week on this course.

Course Content & Weight:

Introduction to operative dentistry	1 hour
Tooth structure (Enamel & Dentine)	1 hour
Instruments used in operative dentistry I	1 hour
Principles of cavity preparation	1 hour
Class I cavity preparation	1 hour
Dental caries I	1 hour
Dental Caries II	1 hour
Class II cavity preparation	1 hour
Instruments used in operative dentistry II	1 hour
Matrices	1 hour
Placement of amalgam restoration	1 hour
Class III cavity Preparation	1 hour
Class IV cavity Preparation	1 hour
Class V cavity Preparation	1 hour
Field isolation for restorative dentistry	1 hour
Bonding techniques to tooth structure	1 hour
Placement of composite restoration	1 hour
Pulp Protection (Liners and Bases)	1 hour

Clinical Handling of Glass-Ionomer	1 hour
Treatment of grossly carious teeth	1 hour
Pin-retained restorations	1 hour
Posterior Composites	1 hour
Caries detection	1 hour
Evaluation criteria for restorations	1 hour
Tooth Discoloration: Etiology and Diagnosis	1 hour
Biomemtic Approach in Operative Dentistry	1 hour

Feedback:

Concerns or complaints should be expressed in the first instance to the course instructor. If no resolution is forthcoming then the issue should be brought to the attention of the Department Chair and if still unresolved to the Dean. Questions about the material covered in the lectures, notes on the content of the course, its teaching and assessment methods can be also sent by e-mail.

References and Supporting Material:

1. *Strongly recommended*:

    - **The Art and Science of Operative Dentistry**; Sturdevant C M, Barton R E, Sockwell C L, Strickland W D, 5th edition, Mosby Co. St. Louis.

2. *Also recommended*:

    - **Fundamentals of Operative Dentistry: A Contemporary Approach**; Summitt J B, Robbins J W, Hilton T J, Schwartz R S, Santos J, 3rd edition, Quintessence Pub Co.
    - **Pickard's Manual of Operative Dentistry**; Kidd E A M, Smith B G N and Pickard H M, 6th edition, Oxford Medical Publications.