



**Mansoura University  
Faculty of Dentistry  
Department of Conservative  
Dentistry**



# **COURSE SPECIFICATION**

## **Advanced Diploma in Esthetic and Restorative Dentistry**

**Course Director: Prof. Salah Hasab Mahmoud,  
Chairman of Conservative Dentistry Department**

**Course Coordinator:**

Dr. Hamdi Hosni Hamama,  
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**2014/2015**



Mansoura University  
Faculty of Dentistry  
Conservative Dentistry Department

## **Division of Operative Dentistry Academic Year 2014/2015**

### **Course Purpose**

This one year program offers advanced education in the recent topics of esthetic and operative dentistry. The program provides a comprehensive training on the recent restorative techniques, minimally invasive dentistry concepts, as well as the clinical application of the recent research outcome in the field of restorative dentistry. The program provides a chance to develop both clinical and research skills of post graduate student (PGS) in the field of restorative dental sciences.

### **Aim**

The scientific content of this program aims to develop the clinical skills of the participants, which will subsequently reflect on the level of service that they provide to their patients. By the end of this diploma, PGS should be able to understand the recent advances in adhesive and esthetic dentistry. Moreover, PGS will be able to present his/her clinical cases in an efficient academic way.

### **Clinical course, progress and development**

- ❖ PGS will be divided into small groups, each will be supervised by the full-time clinical Assistant-, Associate- and full- professors according to their schedule in the clinics.
- ❖ A clinical case from each group will be presented in the department scientific meeting (every fore night). The PGS will gain the skills of presentation, discussion and problem solving during the meeting.

- ❖ Problem-based learning method will be applied throughout the coursework and students will have a journal club on recent scientific topics to develop their analytical skills.
- ❖ The clinical course will demonstrate the ideal treatment modalities of complicated cases. Furthermore, it will train the participant in doing a full oral rehabilitation of certain cases with collaboration with other departments in the faculty.

➤ **Clinical requirements for of the program (Operative Division)**

Category	Specifications		Requirements		
			Number	Unit	
<b>Esthetic Cases</b>	Diastema closure		2	Case	
	Bleaching	Vital	In-office	2	Case
			Dentist-supervised (Home)	1	Case
		Non-vital		1	Case
	Laminate veneers	Direct		6	Tooth
		Indirect		1	Case
<b>Restorative Cases</b>	Management of incipient carious lesions through a medical model		2	Case	
	Inlays		2	Tooth	
	Onlays		2	Tooth	
	Posterior tooth-colored restorations		8	Tooth	
	Anterior tooth-colored restorations		12	Tooth	
	Complex amalgam restorations		8	Tooth	
	Restoration of endodontically-treated teeth		2	Tooth	
	Treatment of root caries		4	Tooth	
	Full mouth rehabilitation case		1	Case	

## ➤ **Attendance**

The PGS should attend at least 75% of the clinical sessions and each PGS group should present at least one case in the departmental scientific meeting (every fore night).

The treatment plan and restorative steps should be approved by one of the full-time staff in the student's logbook.

## ➤ **Examination System**

Successful candidate should pass the written, Clinical and Oral exams at the end of the program. Also, the examination committee should be satisfied with the candidate logbook and clinical performance during the whole program as part of the evaluation.

## ➤ **Grading System (Operative Branch)**

<b>Examination Part</b>	<b>Marks</b>
Written Exam	60
Clinical Exam	70
Oral Exam	25
Total	155

<b>Academic Grading System in Mansoura University</b>	
<b>Percent</b>	<b>Qualification</b>
85-100	Excellent
75-84	Very Good
65-74	Good
50-64	Acceptable
30-49	Weak
0-29	Very Weak

## ➤ **Participant evaluation sheets**

Towards the end of the program each participant have the opportunity to comment confidentially on various aspects, in an anonymous evaluation sheets. The course coordinator will review the student's sheets and write a report, which will be submitted to the course director and the chairman of the department.

## **Program content and learning objectives**

<b>Week</b>	<b>Topic</b>	<b>Description</b>	<b>Objectives</b>
<b>1-3</b>	Minimal Invasive Dentistry (MID)	<ul style="list-style-type: none"> <li>• Philosophy</li> <li>• Principals</li> <li>• Recent treatment protocols</li> <li>• Recent application of MID</li> <li>• Micro dentistry Era</li> </ul>	Candidate will have an idea about the influence of MID philosophy on the 'conventional' concepts and principals
<b>4-6</b>	Cariology and recent caries Removal Methods	<ul style="list-style-type: none"> <li>• Etiology</li> <li>• Histopathology</li> <li>• Caries Risk Assessment</li> <li>• Caries prevention</li> <li>• Recent Caries Removal methods (Chemomechanical caries removal, Air abrasion, Laser ablation and Sonic oscillating systems)</li> </ul>	Candidate should know the recent advances in caries removal methods and how to differentiate between Caries-affected and Caries-infected dental tissues.
<b>7-9</b>	Management of Incipient Carious lesions	<ul style="list-style-type: none"> <li>• Diagnosis</li> <li>• New classification of caries including (ICDAS system)</li> <li>• Recent medical treatment (remineralization protocols)</li> <li>• Conservative surgical treatment models</li> </ul>	Candidate should be aware of the recent medical treatment models and how to achieve maximum conservation of tooth structure
<b>10-12</b>	Management of deep Carious lesions	<ul style="list-style-type: none"> <li>• Diagnosis</li> <li>• Stepwise caries excavation</li> <li>• Partial caries removal concept</li> <li>• Marginal seal</li> </ul>	Candidate should has an idea about the ideal methods of dealing with caries-infected tissues at deep dentin zones, where there is high risk of injuring the pulp

			tissue
<b>13-14</b>	Management of non-carious lesions	<ul style="list-style-type: none"> <li>• Definition</li> <li>• Etiology</li> <li>• Clinical tips</li> <li>• Treatment</li> </ul>	Candidate should have an idea about the non-carious lesion which affect dental hard tissues and how to restore
<b>15-18</b>	Adhesion in Operative Dentistry	<ul style="list-style-type: none"> <li>• Adhesion to Enamel and Dentin</li> <li>• Smear layer</li> <li>• Different approaches for dealing with the smear layer</li> <li>• Classification of dental adhesives</li> <li>• Hybrid layer</li> <li>• Resin Modified GIC adhesives</li> <li>• Luting cements</li> <li>• Extended uses of dental adhesives</li> </ul>	Candidate will know the nature of resin/tooth interface and the recent topics in adhesive dentistry
<b>19-22</b>	Tooth- colored Restorations	<ul style="list-style-type: none"> <li>• Direct <ul style="list-style-type: none"> <li>▪ Resin composites restorations</li> <li>▪ Glass Ionomer Cement restorations</li> </ul> </li> <li>• Indirect (Inlays &amp; Onlays)</li> </ul>	
<b>23-28</b>	Esthetics in Operative Dentistry	<ul style="list-style-type: none"> <li>• Esthetic Formulas and ideal proportions of face and teeth</li> <li>• Smile analysis</li> <li>• Macro- and Micro-abrasion</li> <li>• Dental Bleaching</li> <li>• Laminate veneers</li> </ul>	Candidate will know how to design his/her patient smile and the factors that influence the patient esthetics. Furthermore, this section will highlight the recent esthetic treatment modalities.
<b>29-30</b>	<b>Dental Biomaterials and their clinical use in Restorative</b>	<ul style="list-style-type: none"> <li>• Biocompatibility</li> <li>• Mechanical properties</li> <li>• Fundamentals of selection of the</li> </ul>	Candidate will has an idea about the composition, properties and clinical use of different restorative

	<b>Dentistry</b>	ideal restorative material	materials
<b>31-32</b>	<b>Management of Badly Broken teeth</b>	<ul style="list-style-type: none"> <li>• Vital teeth</li> <li>• Non-vital teeth</li> </ul>	Candidate will learn the recent techniques in conservation and support the remaining tooth structure
<b>33</b>	Indirect Cast metal restorations		
<b>34-35</b>	Laser in Operative Dentistry	<ul style="list-style-type: none"> <li>• Physics of Light</li> <li>• Characteristics of LASER</li> <li>• Ablation of dental tissue</li> <li>• Laser applications in operative dentistry</li> </ul>	
<b>36</b>	Management of dentin hypersensitivity	<ul style="list-style-type: none"> <li>• Definition</li> <li>• Etiology</li> <li>• Treatment</li> </ul>	Candidate will know how the causes of dentin hypersensitivity and how to overcome this problem.
<b>37</b>	Geriatric Dentistry	<ul style="list-style-type: none"> <li>• Target group</li> <li>• Age changes</li> <li>• Management</li> </ul>	

## **Reading list**

The discussions in the departmental meetings are very useful source for the students.

The last editions of the following books are useful.

- Hugh Devlin, Operative Dentistry A Practical Guide to Recent Innovations, Springer-Verlag Berlin Heidelberg
- B Kidd, EAM, Pickards Manual of Operative Dentistry. Oxford Medical Publications
- AJE Qualtrough, JD Satterthwaite, LA Morrow, PA Brunton, Principles of Operative Dentistry, Blackwell Publishing
- Robert G. Craig, John M. Powers, Restorative Dental Materials, Mosby, Inc.

- James Summitt, J Williams Robbins, Richard Schwartz, Jose dos Santos, Fundamentals of Operative Dentistry A Contemporary Approach, Quintessence Publishing Co, Inc
- Heymann H, Swift EJ, Ritter AV, Sturdevant CM. Sturdevant's art and science of Operative Dentistry. 6th edn. St. Louis, Mo.: Elsevier/Mosby, 2013
- Eliades G, Watts DC, Eliades T. Dental hard tissues and bonding : interfacial phenomena and related properties. In: Van Landuyt K, De Munck J, Coutinho E, Peumans M, Lambrecht P, Van Meerbeek B. Bonding to dentin: smear layer and the process of hybridization. Berlin ; New York: Springer, 2005
- International Caries Detection and Assessment System (ICDAS) co-ordinating committee . ICDAS-II. Available from: <https://www.icdas.org/home>
- Ricketts D, Bartlett DW. Advanced Operative Dentistry : a practical approach. Edinburgh ; New York: Churchill Livingstone Elsevier.

### **Course Coordinator:**

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### **Full-time Departmental staff (Operative Division):**

- Prof. Salah Hasab Mahmoud (Professor)
- Prof. Hanan Abdelrazik Hegazi (Professor)
- Dr. Nadia Mohamed Zaghoul (Associate Professor)
- Dr. Ashraf Ibrahim Ali (Assistant Professor)
- Dr. Hamdi Hosni Hamama (Assistant Professor)

### **Course Director and Chairman of the Department**

Prof. Salah Hasab Mahmoud, Professor in Operative Dentistry

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