Republic of Yemen

Ministry of Higher Education & Scientific Research
Emirates International University



Faculty of Dentistry

Department of Conservative Dentistry

Doctor of Dental Surgery (DDS)

Course Specification of

Operative Dentistry IV (Clinical)

Course No. (----)

EMIRATES

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Review committee:

Head of the Department

Quality Assurance head

Dean of Faculty





	l. Course Identification and Gen	eral In	formati	on:		
1	Course Title:	Operati	ve Dentistry	/ IV (Clinica	1)	
2	Course Code & Number:					
3	Carlott	Credit Theory Hours		Hours	Lab.	
3	Credit Hours:	Hours	Lecture	Exercise	Hours	
		2	1	3		
4	Study Level/ Semester at which this Course is offered:	4 th Level / 2 nd Semester				
5	Pre -Requisite (if any):	Operative dentistry III (Clinical)				
6	Co -Requisite (if any):	None				
7	Program (s) in which the Course is Offered:	Doctor of Dental Surgery (DDS)				
8	Language of Teaching the Course:	English				
9	Study System:	Semeste	r based Syst	tem		
10	Mode of Delivery:	Full Tim	e			
11	Location of Teaching the Course:	Faculty of Dentistry				
12	Prepared by:	Assoc. P	rof. Dr. Ibra	nhim Z. Al-S	hami	

II. Course Description:

In this course the students will be trained to restore the teeth with advanced restorative materials and technique within the concept of adhesive cavity design, prepare and restore compound & complex cavities with different restorative material and technique, diagnose and manage carious and non-carious lesions, manage discolored teeth, know the basic principles of minimal intervention dentistry concepts as and when required, manage hypersensitive teeth, prepare cavities in fractured anterior teeth and restore the form, function & esthetics with composite resin material on patients and know the recent trends in the field of operative dentistry regarding restorative materials and technology.





	III. Course Intended Learning Outcomes (CILOs): Upon successful completion of the course, students will be able to:		Referenced PILOs earning out of program
	A. Knowledge and Understanding:	I, A or E	
al	Discuss the concept of adhesive dentistry, adhesion mechanisms, each indication, advantages and withdraws.		A6
a2	Describe the management techniques for discolored teeth.		A4
a3	Utilize minimal intervention dentistry concepts as and when required in patients		A5
a4	Recognize new advancements in the field of operative dentistry and be able to evaluate their potential for clinical use		A6
	B. Intellectual Skills:		
b1	Solve the complaint of postoperative hypersensitivity and pain after a recent operative procedure, with proper diagnosis of the etiology.		B2
b2	Determining and identifying the aesthetic requirements of patients and the possibility of resolving their concerns		В3
b3	Evaluating and treating patients with caries or other dental non-carious pathologies and being able to use all the material required for restoring the shape, function and aesthetics of the tooth in patients of all ages		B5
	C. Professional and Practical Skills:		
c1	Manipulate efficiently the esthetic restorative materials within the concept of adhesive cavity design.		C7





c2	Formulate treatment plan to manage badly broken down vital and none vital teeth and Patient complaint professionally	C1
c3	Apply conservative concept through restorative procedures.	C4
	D. Transferable Skills:	
d1	Communicate with dental assistants and colleagues easily	D3
d2	Able to provide the treatment details to patient /build up good dentist- patient relationship and provide the treatment best way possible to prescribed time limits.	D7, D4
d3	Communicate & share practice & knowledge with the related specialties and get acquainted with evidence based dentistry.	D2

	(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:				
	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies		
a1	Discuss the concept of adhesive dentistry, adhesion mechanisms, each indication, advantages and withdraws.	LecturesDiscussions	 Quizzes Midterm Exam Final Exam		
a2	Describe the management techniques for discolored teeth.	LecturesDiscussions	QuizzesMidterm ExamFinal Exam		
a3	Utilize minimal intervention dentistry concepts as and when required in patients	LecturesDiscussions	 Quizzes Midterm Exam Final Exam		
a4	Recognize new advancements in the field of operative dentistry and be able to evaluate their potential for	LecturesDiscussions	QuizzesMidterm ExamFinal Exam		







B) Alignment of Course Intended Learning Outcomes Solve the complaint of costoperative hypersensitivity and pain after a recent operative procedure, with proper diagnosis of the tiology. Determining and identifying the aesthetic requirements of		Assessment Strategies Quizzes Midterm Exam Final Exam
Solve the complaint of costoperative hypersensitivity and pain after a recent operative procedure, with proper diagnosis of the tiology.	Lectures Demonstrations	QuizzesMidterm Exam
ostoperative hypersensitivity and pain after a recent operative procedure, with roper diagnosis of the tiology.	■ Demonstrations	■ Midterm Exam
		1
atients and the possibility of esolving their concerns	LecturesDemonstrationsDiscussions	 Quizzes Midterm Exam Final Exam
valuating and treating atients with caries or other ental non-carious pathologies and being able to use all the aterial required for restoring the shape, function and esthetics of the tooth in atients of all ages	LecturesDemonstrationsDiscussions	QuizzesMidterm ExamFinal Exam
C) Alignment of Course Intend kills) to Teaching Strategies an	ed Learning Outcomes (Profession d Assessment Methods:	nal and Practical
ourse Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
anipulate efficiently the thetic restorative materials thin the concept of adhesive vity design.	■ Demonstrations	Direct observation Practical Exams Semester work
anage badly broken down	Demonstrations	Direct observation Practical Exams Semester work
tient complaint ofessionally	Practical Cossions	Direct observation Practical Exams
	and none vital teeth and ent complaint essionally	and none vital teeth and ent complaint Demonstrations Discussions Discussions Practical Sessions





	Strategies and Assessment Methods:					
	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies			
d1	Communicate with dental assistants and colleagues easily	Self-LearningPresentationSeminars	Direct observationPractical ExamsSemester work			
d2	Able to provide the treatment details to patient /build up good dentist- patient relationship and provide the treatment best way possible to prescribed time limits.	Self-LearningPresentationSeminars	 Direct observation Practical Exams Semester work 			
d3	Communicate & share practice & knowledge with the related specialties and get acquainted with evidence based dentistry.	Self-LearningPresentationSeminars	Direct observationPractical ExamsSemester work			

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Adhesion in Restorative Dentistry	Development, Classification of bonding system,Generations,Adhesion strategies and technique.	1	1	a1, a2, a4, b1
2	Applied composite resins	- Clinical aspects of Composite Resin material	1	1	a4, b2
3	Restoration of Endodontically treated teeth	 Management of destructed none vital teeth Tooth preparation retention methods 	1	1	a4, b3
4	Bonded amalgam	- Practical Aspects of Amalgam Retention - Pins vs Bonded Restorations	1	1	a1, a4

Operative Dentistry IV (clinical)



No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
	restoration	- Amalgam Bonding Procedure			
		- Caries management			
	Concepts of	*Non invasive			
5	Minimal invasive dentistry	*Micro invasive	2	2	a3, a4,
		*Minimally invasive			b2
		- ART, PPR			
	Dentin Hyper-	- Etiology			
6	sensitivity and Post Restorative	- diagnosis		1	a1, a4,
	Pain	- management of hypersensitive tooth		•	b1
7	Midterm Exam	MCQs and essay questions	1	1	a1-a4,
	Management of	- Definition of non-carious cervical			b1, b2
	non-carious	lesions NCCL; cervical erosion,			
	cervical lesion	abrasion and abfraction.			
		- Etiological causes of non-carious			
		cervical lesions.			
		- Clinical features of tooth surface			
8		loss.	2	2	a1, a3,
		- Treatment strategies:			b3
		type of restorative materials			
		- Restoration of Cervical lesions:			
		(non-esthetic & esthetic restorative			
		methods).			
		- Discoloration & Bleaching			
9		Different method of bleaching discolored teeth (bleaching – laminate-			a2, a4,
9		Micro abrasion).	2	2	b1, b2
	-	Esthetic consideration			22



No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
10	Anterior esthetic restorations	 Direct composite veneer. different clinical application. Porcelain Veneers: Indications and contra indications, Clinical technique, Delivery and cementation, Finishing and polishing. 	2	2	a1, a3, b2
11	Recent Advances in operative dentistry	New restorative materials and equipment'sCAD CAM Restorations	1	1	a4, b2, b3,
12	Final Exam	- MCQs and essay questions	1	1	a1, a2, a3, a4, b1, b2, b3
	Number of Weel	ks /and Units Per Semester	16	16	

В	. Case Studies and Practical Aspect:			
No.	Tasks/ Experiments	Week Due	Contact Hours	Learning Outcomes (CILOs)
1	Compound & complex cavity preparation and restoration using direct restorations	1st to 6th	18	c1, c2, c3 d1, d2
2	Minimal intervention dentistry (preventive resin restorations) + Restoring Compound & complex cavity	7 th and 8 th	6	c1, c3, d1 d2
3	Preparation and restoration of class IV (silicone keys)	9 th and 10 th	6	c1, c2, c3 d2, d3
4	Treating defective restorations and Restoring Complex cavity: - pin - retained amalgam restoration - Tooth build up with post system	11 th and 12 th	6	c1, c2, d2, d3
5	Full resin-based composite coverage of tooth (direct composite veneers)	13 th	3	c1, c2, c3, d2, d3
6	Bleaching of discolored teeth+ Restoring Compound &	14 th	L UoUI	c1, c2, c3,







No.	Tasks/ Experiments	Week Due	Contact Hours	Learning Outcomes (CILOs)
	complex cavity			d2, d3
7	Practical Exam	15 th	3	c1, c2, c3 d1, d2, d3
	Number of Weeks /and Units Per Semester	15	45	

V. Teaching Strategies of the Course:

- Lectures
- Presentations
- Demonstrations
- Discussions
- Seminars
- Practical Sessions
- Self-Learning

VI. Assessment Methods of the Course:

- Quizzes
- Midterm Exam
- Final Exam
- Practical Exam
- Semester work
- Direct observation

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	Semester practical work: - Clinical Cases and Requirements	1 st - 14 th	10	c1, c2, c3, d1, d2, d3
	Total		10	





VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Assignments	1 st - 14 th	10	10 %	c1, c2, c3, d1, d2, d3
2	Quizzes	6 th	5	5 %	a1, a2, a3, a4, b1, b2
3	Midterm Exam	8 th	20	20 %	a1, a2, a3, a4, b1, b2, b3
4	Practical Exam	15 th	15	15 %	c1, c2, c3, d1, d2, d3
5	Final Exam	16 th	50	50 %	a1, a2, a3, a4, b1, b2, b3
	Total		100	100%	

IX. Learning Resources:

1- Required Textbook(s):

- 1- Harold Heymann, Edward Swift, Andre Ritter, 2012: Sturdevant's Art and Science of Operative Dentistry, 6th Edition, Mosby, USA.
- 2- Avijit Banerjee, Timothy F. Watson, 2011: Pickard's Manual of Operative Dentistry, 9th Edition, Oxford, England.

2- Essential References:

- 1- Peter Jacobsen, 2008: Restorative Dentistry: An Integrated Approach, 2nd Edition, Wiley-Blackwell, USA.
- 2- Nisha Garg, Amit Garg, 2015: Textbook of Operative Dentistry. 3rd Edition, JP Medical Ltd, India.

3- Electronic Materials and Web Sites etc.:

Websites:

1- Journal of dentistry

https://www.journals.elsevier.com > journal-of-dentistry

2- Operative Dentistry Journal







https://www.meridian.allenpress.com/operative-dentistry

3- Dental Materials Journal

https://www.researchgate.net

4- Digital Restorative Dentistry

https://www.springer.com/gp/book

	X. Course Policies: (Based on the Uniform Students' By law (2007)
1	Class Attendance: Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	Tardiness: A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	Exam Attendance/Punctuality: No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	Assignments & Projects: Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	Cheating: Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	Forgery and Impersonation: Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	Other policies: The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.







Faculty of Dentistry

Department of Conservative Dentistry

Program of Doctor of Dental Surgery (DDS)

Course Plan (Syllabus) of

Operative Dentistry IV (Clinical)

Course No. (-----)

I. Information about	t Faculty Member Res	pons	ible	for	the	Cou	rse:
Name of Faculty Member:	Ibrahim Z. Al-Shami	Office Hours					
Location& Telephone No.:	Sanaa 777980568		4	Hours	Wee	kly	
E-mail:	ibrahimzaed@yahoo.com	SAT 1	SUN	MON 1	TUE 1	WED	THU







	II. Course Identification and Gen	eral Ir	nformat	ion:	
1	Course Title:	Operati	ve Dentistry	/ IV (Clinical	()
2	Course Code & Number:				
	Credit Hours:	Credit Theory Hours			Lab.
3		Hours	Lecture	Exercise	Hours
		2	1	3	-
4	Study Level/ Semester at which this Course is offered:	4th Level / 2nd Semester			
5	Pre –Requisite (if any):	Operative dentistry III (Clinical)			
6	Co -Requisite (if any):	None			
7	Program (s) in which the Course is Offered:	Doctor of Dental Surgery (DDS)			
8	Language of Teaching the Course:	English			
9	Study System:	Semester based System			
10	Mode of Delivery:	Full Time			
11	Location of Teaching the Course:	Faculty of Dentistry			
12	Prepared by:	Assoc. Prof. Dr. Ibrahim Z. Al-Shami			hami

III. Course Description:

In this course the students will be trained to restore the teeth with advanced restorative materials and technique within the concept of adhesive cavity design, prepare and restore compound & complex cavities with different restorative material and technique, diagnose and manage carious and non-carious lesions, manage discolored teeth, know the basic principles of minimal intervention dentistry concepts as and when required, manage hypersensitive teeth, prepare cavities in fractured anterior teeth and restore the form, function & esthetics with composite resin material on patients and know the recent trends in the field of operative dentistry reparding restorative materials and technology.







IV. Course Intended Learning Outcomes (CILOs): Upon successful completion of the Course, student will be able to: A. Knowledge and Understanding: Discuss the concept of adhesive dentistry, adhesion mechanisms, each indication, advantages and withdraws. al a2 Describe the management techniques for discolored teeth. a3 Utilize minimal intervention dentistry concepts as and when required in patients Recognize new advancements in the field of operative dentistry and be able to evaluate a4 their potential for clinical use **B.** Intellectual Skills: Solve the complaint of postoperative hypersensitivity and pain after a recent operative procedure, with proper diagnosis of the etiology. b1 Determining and identifying the aesthetic requirements of patients and the possibility of b2 resolving their concerns Evaluating and treating patients with caries or other dental non-carious pathologies and being able to use all the material required for restoring the shape, function and aesthetics of **b**3 the tooth in patients of all ages C. Professional and Practical Skills: Manipulate efficiently the esthetic restorative materials within the concept of adhesive cavity design. c1 Formulate treatment plan to manage badly broken down vital and none vital teeth and Patient c2 complaint professionally Apply conservative concept through restorative procedures. c3 D. Transferable Skills: d1 Communicate with dental assistants and colleagues easily Able to provide the treatment details to patient /build up good dentist- patient relationship and provide the treatment best way possible to prescribed time limits. d2 Communicate & share practice & knowledge with the related specialties and acquainted with evidence based dentistry. d3





V. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contac Hours
1	Adhesion in Restorative Dentistry	 Development, Classification of bonding system, Generations, Adhesion strategies and technique. 	1	1
2	Applied composite resins	- Clinical aspects of Composite Resin material	1	1
3	Restoration of Endodontically treated teeth	 Management of destructed none vital teeth Tooth preparation retention methods 	1	1
4	Bonded amalgam restoration	- Practical Aspects of Amalgam Retention- Pins vs Bonded Restorations- Amalgam Bonding Procedure	1	1
5	Concepts of Minimal invasive dentistry	- Caries management *Non invasive *Micro invasive *Minimally invasive - ART, PPR	2	2
6	Dentin Hyper- sensitivity and Post Restorative Pain	Etiologydiagnosismanagement of hypersensitive tooth	1	1
7	Midterm Exam	MCQs and essay questions	1	1
}	Management of non-carious cervical lesion	 Definition of non-carious cervical lesions NCCL; cervical erosion, abrasion and abfraction. Etiological causes of non-carious 	2	2





V. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contac Hours
		cervical lesions. - Clinical features of tooth surface loss. - Treatment strategies: type of restorative materials - Restoration of Cervical lesions: (non-esthetic & esthetic restorative methods).		
9	Management of discolored teeth	 Discoloration & Bleaching Different method of bleaching discolored teeth (bleaching – laminate- Micro abrasion). Esthetic consideration 	2	2
10	Anterior esthetic restorations	 Direct composite veneer. different clinical application. Porcelain Veneers: Indications and contra indications, Clinical technique, Delivery and cementation, Finishing and polishing. 	2	2
11	Recent Advances in operative dentistry	New restorative materials and equipment's CAD CAM Restorations	1	1
12	Final Exam	- MCQs and essay questions	1	1
	Number of We	eks /and Units Per Semester	16	16

В.	Case Studies and Practical Aspect:		
No.	Tasks/ Experiments	Week Due	Contact Hours
1	Compound & complex cavity preparation and restoration using direct restorations	1st to 6th	







No.	Tasks/ Experiments	Week Due	Contac Hours
2	Minimal intervention dentistry (preventive resin restorations) + Restoring Compound & complex cavity	7 th and 8 th	6
3	Preparation and restoration of class IV (silicone keys)	9 th and 10 th	6
4	Treating defective restorations and Restoring Complex cavity: - pin - retained amalgam restoration - Tooth build up with post system	11 th and 12 th	6
5	Full resin-based composite coverage of tooth (direct composite veneers)	13 th	3
6	Bleaching of discolored teeth+ Restoring Compound & complex cavity	14 th	3
7	Practical Exam	15 th	3
	Number of Weeks /and Units Per Semester	15	45

VI. Teaching Strategies of the Course:

- Lectures
- Presentations
- Demonstrations
- Discussions
- Seminars
- Practical Sessions
- Self-Learning

VII. Assessment Methods of the Course:

- Quizzes
- Midterm Exam
- Final Exam
- Practical Exam
- Semester work





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Direct observation

No.	Assignments	Week Due	Mark
1	Semester practical work: - Clinical Cases and Requirements	1st- 14th	10

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment
1	Assignments	1 st - 14 th	10	10 %
2	Quizzes	6 th	5	5 %
3	Midterm Exam	8 th	20	20 %
4	Practical Exam	15 th	15	15 %
5	Final Exam	16 th	50	50 %
	Total		100	100%

X. Learning Resources:

1- Required Textbook(s):

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المُمَالُورَاتِ الْمِيْتِينَ الجامعة الإماراتية الدولية كلية طب الاسنان

3- Electronic Materials and Web Sites etc.:

XI.	Course Policies: (Based on the Uniform Students' Bylaw (2007)
1	Class Attendance: Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
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Operative Dentistry IV (clinical)

