

*Republic of Yemen*  
**21 September University of Medical & Applied Sciences**



**FACULTY OF DENTISTRY**  
**Bachelor of Dental Surgery (B.D.S)**  
**Program Specification**

**Department of Prosthodontics.**

Course Specification of  
**Clinical Fixed Prosthodontics - 2**

Course Code. (09.12.934)

**2025- 2024.**

## I. General Information:

1.	Course Title:	<b>Clinical Fixed Prosthodontics – 2</b>				
2.	Course Code:	09.12.934				
3.	Credit Hours:	Credit Hours	Theory Contact Hours		Practical Contact Hours	
			Lecture	Tutorial/ Seminar	Lab	Clinical
		3	2	--	--	3
4.	Level/ Semester at which this Course is offered:	4 <sup>th</sup> Level / 2 <sup>nd</sup> Semester				
5.	Pre –Requisite (if any):	Clinical Fixed Prosthodontics – 1.				
6.	Co –Requisite (if any):	-----				
7.	Program (s) in which the Course is Offered:	Bachelor of Dental Surgery (B.D.S)				
8.	Language of Teaching the Course:	English.				
9.	Location of Teaching the Course:	Faculty of Dentistry.				
10.	Prepared by:	<i>Dr. Mohsen Ali Al-Hamzi</i>				
11	Date and Number of Approval by Council:					

## II. Course Description:

Depth in the science and art of Fixed Prosthodontics (FPs) and through which students the students to transfer the clinical simulation exercises into clinical applications, through the comprehensive management of a minimum number of anterior fixed prosthodontics cases. It focuses on understanding of the various clinical simulation procedures and the mutual interdependence between technical and clinical quality. It includes also theoretically: All ceramic systems, Ceramic fused to metal, Zirconia Ceramic, Laminate veneers,

III. Course Intended Learning Outcomes (CILOs) : Upon successful completion of the course, students will be able to:		Referenced PILOs		
<b>A. Knowledge and Understanding:</b>		<b>I, P or M/A</b>		
a1	Explain the different clinical, laboratory and special investigatory procedures practiced in dentistry that related to clinical practice of Fixed Prosthodontics.	M/A	A4	Describe the different clinical, laboratory and special investigatory procedures practiced in dentistry.
a2	Describe the digital technology in Fixed Prosthodontics and explain the principles of evidence-based dentistry as CAD/CAM, 3D Prenter, CBCT...	M/A	A6	Explain of the digital technology in dentistry & Explain the principles of evidence-based dentistry and its relation to scientific research
<b>B. Intellectual Skills:</b>				
b1	Evaluation of critical thinking and evidence-based problem solving when providing patient's care in the Fixed Prosthodontics clinical practice.	M/A	B3	Evaluation of critical thinking and evidence-based problem solving when providing patient's care.
b2	Analyze of Artificial intelligence (AI) and digital technology in Fixed Prosthodontics to solve the problems and recreate the reasonable solutions.	M/A	B6	Analyze of Artificial intelligence (AI) and digital technology in dentistry to solve the problems of oral and dental surgery and recreate the reasonable solutions.
<b>C. Professional and Practical Skills:</b>				
c1	Obtain and record a comprehensive history, perform an appropriate physical examination, and carry out different investigations to reach a correct diagnosis and treatment of different cases of Fixed prosthodontics patients.	M/A	C1	Obtain and record a comprehensive history, perform an appropriate physical examination, and carry out different investigations to reach a correct diagnosis and treatment.

c2	Practicing Artificial intelligence (AI) and digital technology in Fixed Prosthodontics for Both Clinical and Laboratory Procedures.	M/A	C7	Practicing Artificial intelligence (AI) and digital technology in dentistry.
<b>D. Transferable Skills:</b>				
d1	Work individually and in team and develop lifelong learning using up to date technology that help in understanding the diseases and its control and prevention that related to clinical practice of Fixed Prosthodontics	M/A	D3	Work individually and in team and develop lifelong learning using up to date technology that help in understanding the diseases and its control and prevention
d2	Maintain full and accurate clinical records (manual and electronic) in Fixed Prosthodontics	M/A	D6	Maintain full and accurate clinical records (manual and electronic)
<b>I= Introduced, P=Practiced or M/A= Mastered/Advanced</b>				

<b>(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:</b>			
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
a1	Explain the different clinical, laboratory and special investigatory procedures practiced in dentistry that related to clinical practice of Fixed Prosthodontics.	<ul style="list-style-type: none"> <li>▪ Interactive lectures</li> <li>▪ Discussion</li> <li>▪ Self-learning</li> </ul>	<ul style="list-style-type: none"> <li>-Written exam (mid and final terms and quizzes),</li> <li>-Final oral exam</li> <li>-Homework</li> </ul>
a2	Describe the digital technology in Fixed Prosthodontics and explain the principles of evidence-based dentistry as CAD/CAM, 3D Prenter, CBCT...	<ul style="list-style-type: none"> <li>▪ Interactive lectures</li> <li>▪ Discussion</li> <li>▪ Self-learning</li> </ul>	<ul style="list-style-type: none"> <li>-Written exam (mid and final terms and quizzes),</li> <li>- Final oral exam</li> <li>- Homework</li> </ul>
		▪	▪

**(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:**

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
b1	Evaluation of critical thinking and evidence-based problem solving when providing patient's care in the Fixed Prosthodontics clinical practice.	<ul style="list-style-type: none"> <li>▪ Interactive lectures</li> <li>▪ Self-learning</li> <li>▪ Problem Based Learning (PBL)</li> <li>▪ Training</li> </ul>	<ul style="list-style-type: none"> <li>-Written Exam</li> <li>-Final Oral Exam</li> <li>-Final Clinical Exam</li> <li>-Final Practical Exam</li> </ul>
b2	Analyze of Artificial intelligence (AI) and digital technology in Fixed Prosthodontics to solve the problems and recreate the reasonable solutions.	<ul style="list-style-type: none"> <li>▪ Interactive lectures</li> <li>▪ Self-learning</li> <li>▪ Problem Based Learning (PBL)</li> <li>▪ Training</li> </ul>	<ul style="list-style-type: none"> <li>-Written Exam</li> <li>-Final Oral Exam</li> <li>-Final Practical Exam</li> </ul>
		▪	▪

**(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:**

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
c1	Obtain and record a comprehensive history, perform an appropriate physical examination, and carry out different investigations to reach a correct diagnosis and treatment of different cases of Fixed prosthodontics patients.	<ul style="list-style-type: none"> <li>▪ Clinical session</li> <li>▪ Case study (CBL)</li> <li>▪ Problem Based Learning (PBL)</li> </ul>	<ul style="list-style-type: none"> <li>-Final Clinical Exam</li> <li>- Final Practical Exam</li> <li>- OSCE</li> <li>- OSPE</li> </ul>
c2	Practicing Artificial intelligence (AI) and digital technology in Fixed Prosthodontics for Both Clinical and Laboratory Procedures.	<ul style="list-style-type: none"> <li>▪ Clinical session</li> <li>▪ Case study (CBL)</li> <li>▪ Problem Based Learning (PBL)</li> </ul>	<ul style="list-style-type: none"> <li>-Final Clinical Exam</li> <li>- Final Practical Exam</li> <li>- OSCE</li> <li>-OSPE</li> </ul>

**(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:**

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
d1	Work individually and in team and develop lifelong learning using up to date technology that help in understanding the diseases and its control and prevention that related to clinical practice of Fixed Prosthodontics	<ul style="list-style-type: none"> <li>- Seminars</li> <li>- Discussion</li> <li>- Case Study (CBL)</li> <li>- Self Learning</li> <li>- Presentation</li> <li>- PBL</li> </ul>	<ul style="list-style-type: none"> <li>- Homework</li> <li>- Research</li> <li>- Oral Discussion</li> </ul>
d2	Maintain full and accurate clinical records (manual and electronic) in Fixed Prosthodontics	<ul style="list-style-type: none"> <li>- Seminars</li> <li>- Discussion</li> <li>- Case Study (CBL)</li> <li>- Self Learning</li> <li>- Presentation</li> </ul>	<ul style="list-style-type: none"> <li>- Homework</li> <li>- Research</li> <li>- Oral Discussion</li> </ul>

## IV. Course Contents:

### A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	<b>Introduction to Course</b>	Review of the 1st term topics that related to the present term. Study plan of the 2 <sup>nd</sup> term.	1	2	a.1, a.2
2	<b>Introduction of Dental Ceramics</b>	Definition Classification of Dental Ceramics according to their Applications, Fabrication method, and Crystalline phase – Fusing Temperature.	1	2	a.1, a.2
3	Ceramic fused to metal restorations.	Defecations, Types, Bonding mechanism, Alloys Used, Coping Design, Laboratory Procedures of making a Ceramic fused to metal restorations.	1	2	a.1, a.2, b.1, b.2
4	<b>All Ceramic restorations.</b>	All-Ceramic Restorations, Types, and Technique, Platinum Foil and Aluminum Core: Slip-Cast Alumina Crown and FPDs: Heat-Pressed Ceramic: Castable-Ceramic Restorations: CAD-CAM Ceramic Restoration:	2	4	a.1, a.2, b.1, b.2, c.2,

No.	Units/Topics List	Sub Topics List	Number of Weeks	Cont act Hour s	Learning Outcomes (CILOs)
5	<b>Zirconia Ceramic</b>	Historical Background, Chemical Composition of Y-TZP Zirconia Crystals Forms and Transformation toughing. The Indication and Uses of Zirconia Ceramic. Advantages and Disadvantages of Zirconia Ceramic. Special consideration of all ceramic preparation and restorations.	2	4	a1, a2,b1 b2, c1, c2, d.1, d2
6	<b>Zirconia Ceramic Continue</b>	Laboratory Procedures of Zirconia Ceramic (Two steps): Framework Fabrication. Ceramic-veneer Fabrication. CAD/CAM, Milling-Technique. Manual Milling-Technique.	1	2	a1, a2,b1 b2, c1, c2, d.1, d2
7	<b>Laminate veneers</b>	Defecation, Types, Indications, Contra-indications, Advantages and Disadvantages of Laminate veneers.	1	2	a1, a2,b1 b2, c1, c2, d.1, d2
8	<b>Mid – term Exam</b>		1	2	a1, a2,b1 b2, c1, c2, d.1, d2
9	<b>Laminate veneers</b>	Clinical and laboratory procedures of Ceramic Laminate veneers (Direct and indirect Techniques). Cementation. Maintenance.	1	2	a1, a2,b1 b2, c1, c2, d.1, d2
10	<b>Shade Selection</b>	– Defecation, Dimensions of Color, Technique for shade selection,	1	2	a1, a2,b1 b2, c1, c2, d.1, d2
11	<b>Intra-coronal Restorations.</b>	Definitions, Inlay, Onlay, Overlay. Endo-crown – Indications, tooth preparations for all types.	1	2	a1, a2,b1 b2, c1, c2, d.1, d2
12	<b>Esthetic Problem Solving in Fixed Prosthodontics</b>	Diastema, Spacing, Crowding, Tilting, Over-Erupted, Discolorations, teeth wearing.	1	2	a1, a2,b1 b2,
13	<b>The Final Review.</b>	The teacher's answer for any question from any student in any topic.	1	2	a1, a2,b1 b2, c1, c2, d.2

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
16	The Final Exam	...	1	2	a1, a2, b1, b2, c1, c2, d.1, d.2
Number of Weeks /and Units Per Semester			16	32	

### B. Practical Aspect (Lab/Clinical) (if any):

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Introduction and Demonstration about the Dental Clinic that will be use in the clinical procedures of Fixed prosthodontics.	1	2	a1, b1, c1, c2, d1
2	Conduct a clinical examination and fill out a Case Sheet, the student takes the primary impression and made (two) Study cast (Diagnostic Cast), the first one was kept as a reference. For the second, it is installed on a regular applicator with an example of the corresponding teeth (Simple Articulator), and the tooth are prepared for posterior metal – ceramic crown.	2	4	a1, a2, b1, b2, c1, d1
3	The patient is brought, along with a case sheet, radiograph, temporary, study casts, and the supervisor is called to give permission (Starting) to begin work in the mouth, starting with taking the color (Color Selection). Then anesthetize the patient and begin preparation, after tooth preparation, make (Gingival Retraction) and take the final impression. Using silicon, the bite is taken (bite recording), then the provisional (temporary) crown or bride is installed correctly.	2	4	a1, a2, b1, b2, c1, d1
4	Gently remove the temporary, and when the patient experiences pain, he is anesthetized to perform the metal try-in, then reinstall the temporary.	1	2	a2, b2, c2, d1
5	Gently remove the temporary one, and try-in the metal-ceramic prosthesis. After that, the final glaze is performed. Then the final prosthesis is installed in the patient's mouth with final or temporary cement (depending on the case), then the procedure is done. An x-ray of the case and confirm it with the previous x-rays in the Case Sheet.	1	2	a2, b2, c1
6	Conduct a clinical examination and fill out a Case Sheet, primary impression and made (two) Study cast the first and second as the previous and the tooth are prepared for anterior metal – ceramic crown.	1	2	a1, b1, c1, c2, d1

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
7	The patient is brought, along with a case sheet, radiograph, temporary, study casts, starting with taking the color, then anesthetize the patient and begin preparation, after tooth preparation, make gingival retraction and take the final impression, the bite is taken and the temporary anterior crown or bride is inserted correctly.	1	2	b1,b2,c1,c2
8	Gently remove the temporary, perform the metal try-in, then reinstall the temporary.	1	2	b1,b2,c1,c2
9	Gently remove the temporary, try-in the metal-ceramic prosthesis. After that, the final glaze is performed. Then the final prosthesis is inserted and the permanent or temporary cement, then the procedure is done as the previous case.	1	2	b1,b2,c1,c2
10	- Fiber Post Crown Fabrication in the patient mouth.	2	4	b1,b2,c1,c2
14	- -Final Practical Exam	1	2	b1,b2,c1,c2
<b>Number of Weeks /and Units Per Semester</b>		<b>14</b>	<b>28</b>	

### 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	1-12	10	10 %	a1, a2, c1, d2
2	Quizzes 1 & 2	6, 10	5	5 %	a.1, a.2, b.1, b.2,d.1, d.2
3	Mid-Term Theoretical Exam	8	15	15 %	a.1, a.2, b.1, b.2,d.1, d.2
4	Mid-Term clinical Exam	7	10	10 %	b.1, b.2, c.1, c.2, d.1, d.2
5	Final clinical Exam.	14	20	20 %	b.1, b.2, c.1, c.2, d.1, d.2
6	Final Theoretical Exam	16	40	40 %	a.1, a.2, b.1, b.2, d.1, d.2
<b>Total</b>			<b>100</b>	<b>100 %</b>	

### IX. Learning Resources:

<ul style="list-style-type: none"> <li>• <i>Written in the following order:</i> Author, Year of publication, Title, Edition, Place of publication, Publisher.</li> </ul>
<b>1- Required Textbook(s) (maximum two) :</b>
<ol style="list-style-type: none"> <li>1- Stephen F. Rosenstiel , Martin F. Land., 2015,: Contemporary of fixed prosthodontics. last edition, MOSBY Inc,</li> <li>2- Shillingburg, H.T., Hobo, S., Whitsett, L.D.: Fundamentals of Fixed Prosthodontics, last edition. Quintessence Pub. Co.</li> </ol>
<b>2- Essential References</b>
<ol style="list-style-type: none"> <li>3- V Rangarajan (Author), T V Padmanabhan,2017: " Textbook of Prosthodontics ", 2nd edition Elsevier India.</li> <li>4- David W. Bartlet. ,2003,:Clinical Problem Solving in Prosthodontics 1 edition Churchill Livingstone.</li> <li>5- Vijay Prakash , Ruchi Gupta ,2017:Concise Prosthodontics- E Book: Prep Manual for Undergraduates 2nd Edition, Elsevier India.</li> </ol>
<b>3- Electronic Materials and Web Sites etc.:</b>
<p><b>Websites:</b></p> <ul style="list-style-type: none"> <li>▪ <a href="http://www.journalofprosthodonticdentistry.com">http://www.journalofprosthodonticdentistry.com</a></li> <li>▪ <a href="http://www.internationaljournalofprosthodonticdentistry.com">http://www.internationaljournalofprosthodonticdentistry.com</a></li> <li>▪ <a href="http://www.journalofadvancedprosthodontic.com">http://www.journalofadvancedprosthodontic.com</a></li> </ul>

<b>X. Course Policies: (Based on the Uniform Students' By law (2007)</b>	
<b>1</b>	<b>Class Attendance:</b> 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.
<b>2</b>	<b>Tardiness:</b> A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
<b>3</b>	<b>Exam Attendance/Punctuality:</b> 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.
<b>4</b>	<b>Assignments &amp; Projects:</b> Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
<b>5</b>	<b>Cheating:</b>

	<p>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.</p>
6	<p><b>Forgery and Impersonation:</b></p> <p>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.</p>
7	<p><b>Other policies:</b></p> <p>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.</p>

## Faculty of Dentistry

### Department of Prosthodontics

#### Program of Bachelor of Dental Surgery (B.D.S)

#### Course Plan (Syllabus) of Clinical Fixed Prosthodontics - 2

Course Code. 09.12.934

I. Information about Faculty Member Responsible for the Course:							
Name of Faculty Member:		Office Hours					
Location & Telephone No.:	-----						
E-mail:	--@--	SAT	SUN	MON	TUE	WED	THU

2024/2025

## II. Course Identification and General Information:

1	Course Title:	<b>Clinical Fixed Prosthodontics - 1</b>			
2	Course Code & Number:	09.12.934			
3	Credit Hours:	Credit Hours	Theory Hours		Clinical. Hours
			Lecture	Exercise	
		3	2	--	3
4	Study Level/ Semester at which this Course is offered:	4 <sup>th</sup> Level / 1 <sup>st</sup> Semester			
5	Pre –Requisite (if any):	Preclinical-Clinical Fixed Prosthodontics 1,2			
6	Co –Requisite (if any):	-----			
7	Program (s) in which the Course is Offered:	Bachelor of Dental Surgery (B.D.S)			
8	Language of Teaching the Course:	English			
9	Study System:	Faculty of Dentistry			
10	Mode of Delivery:	Regular, Semester System			
11	Location of Teaching the Course:	Faculty of Dentistry.			
12	Prepared by:	<i>Associate Prof. Mohsen Ali Al-Hamzi</i>			
13	Date of Approval:				

11.	Course Title:	<b>Clinical Fixed Prosthodontics – 2</b>				
12.	Course Code:	09.12.934				
13.	Credit Hours:	Credit Hours	Theory Contact Hours		Practical Contact Hours	
			Lecture	Tutorial/ Seminar	Lab	Clinical
			3	2	--	--
14.	Level/ Semester at which this Course is offered:	4 <sup>th</sup> Level / 2 <sup>nd</sup> Semester				

15.	<b>Pre –Requisite (if any):</b>	Clinical Fixed Prosthodontics – 1.
16.	<b>Co –Requisite (if any):</b>	-----
17.	<b>Program (s) in which the Course is Offered:</b>	Bachelor of Dental Surgery (B.D.S)
18.	<b>Language of Teaching the Course:</b>	English.
19.	<b>Location of Teaching the Course:</b>	Faculty of Dentistry.
20.	<b>Prepared by:</b>	<i>Dr. Mohsen Ali Al-Hamzi</i>
11	<b>Date and Number of Approval by Council:</b>	

### III. Course Description:

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### IV. Course Intended Learning Outcomes (CILOs) :

Upon successful completion of the Course, student will be able to:

	<b>A. Knowledge and Understanding:</b>
a1	Explain the different clinical, laboratory and special investigatory procedures practiced in dentistry that related to clinical practice of Fixed Prosthodontics.
a2	Describe the digital technology in Fixed Prosthodontics and explain the principles of evidence-based dentistry as CAD/CAM, 3D Prenter, CBCT...
	<b>B. Intellectual Skills:</b>
b1	Evaluation of critical thinking and evidence-based problem solving when providing patient's care in the Fixed Prosthodontics clinical practice.
b2	<b>Analyze of Artificial intelligence (AI)</b> and digital technology in Fixed Prosthodontics to solve the problems and recreate the reasonable solutions.
	<b>C. Professional and Practical Skills:</b>
c1	<b>Obtain and record a</b> comprehensive history, perform an appropriate physical examination, and carry out different investigations to reach a correct diagnosis and treatment of different cases of Fixed prosthodontics patients.

c2	Practicing Artificial intelligence (AI) and digital technology in Fixed Prosthodontics for Both Clinical and Laboratory Procedures.

#### D. Transferable Skills:

d1	Work individually and in team and develop lifelong learning using up to date technology that help in understanding the diseases and its control and prevention that related to clinical practice of Fixed Prosthodontics
d2	Maintain full and accurate clinical records (manual and electronic) in Fixed Prosthodontics

I= Introduced, P=Practiced or M/A= Mastered/Advanced

### V. Course Contents:

#### A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	<b>Introduction to Course</b>	Review of the 1st term topics that related to the present term. Study plan of the 2 <sup>nd</sup> term.	1	2
2	<b>Introduction of Dental Ceramics</b>	Definition Classification of Dental Ceramics according to their Applications, Fabrication method, and Crystalline phase Fusing Temperature.	1	2
3	<b>Ceramic fused to metal restorations.</b>	Defecations, Types, Bonding mechanism, Alloys Used, Coping Design, Laboratory Procedures of making a Ceramic fused to metal restorations.	1	2
4	<b>All Ceramic restorations.</b>	All-Ceramic Restorations, Types, and Technique,	2	4

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
		Platinum Foil and Aluminum Core: Slip-Cast Alumina Crown and FPDs: Heat-Pressed Ceramic: Castable-Ceramic Restorations: CAD-CAM Ceramic Restoration:		
5	<b>Zirconia Ceramic</b>	Historical Background, Chemical Composition of Y-TZP Zirconia Crystals Forms and Transformation toughing. The Indication and Uses of Zirconia Ceramic. Advantages and Disadvantages of Zirconia Ceramic. Special consideration of all ceramic preparation and restorations.	2	4
6	<b>Zirconia Ceramic Continue</b>	<ul style="list-style-type: none"> <li>– Laboratory Procedures of Zirconia Ceramic (Two steps):</li> <li>– Framework Fabrication.</li> <li>– Ceramic-veneer Fabrication.</li> <li>– CAD/CAM, Milling-Technique.</li> <li>– Manual Milling-Technique.</li> </ul>	1	2
7	<b>Laminate veneers</b>	<ul style="list-style-type: none"> <li>– Defecation, Types, Indications, Contra-indications, Advantages and Disadvantages of Laminate veneers.</li> <li>–</li> </ul>	1	2
8	<b>Mid – term Exam</b>		1	2
9	<b>Laminate veneers</b>	Clinical and laboratory procedures of Ceramic Laminate veneers (Direct and indirect Techniques). Cementation. Maintenance.	1	2
10	<b>Shade Selection</b>	<ul style="list-style-type: none"> <li>– Defecation, Dimensions of Color, Technique for shade selection,</li> </ul>	1	2
11	<b>Intra-coronal Restorations.</b>	<ul style="list-style-type: none"> <li>– Definitions,</li> <li>– Inlay, Onlay, Overlay.</li> <li>– Endo-crown</li> <li>– Indications, tooth preparations for all types.</li> </ul>	1	2

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
12	<b>Esthetic Problem Solving in Fixed Prosthodontics</b>	<ul style="list-style-type: none"> <li>– Diastema, Spacing, Crowding,</li> <li>– Tilting, Over-Erupted,</li> <li>– Discolorations, teeth wearing.</li> </ul>	1	2
13	<b>The Final Review.</b>	– The teacher's answer for any question from any student in any topic.	1	2
16	<b>The Final Exam</b>	...	1	2
<b>Number of Weeks /and Units Per Semester</b>			<b>16</b>	<b>32</b>

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	<b>Introduction to Course</b>	Review of the 1st term topics that related to the present term. Study plan of the 2 <sup>nd</sup> term.	1	2
2	<b>Introduction of Dental Ceramics</b>	Definition Classification of Dental Ceramics according to their Applications, Fabrication method, and Crystalline phase – Fusing Tempreture.	1	2
3	Ceramic fused to metal restorations.	Defecations, Types, Bonding mechanism, Alloys Used, Coping Design, Laboratory Procedures of making a Ceramic fused to metal restorations.	1	2
4	<b>All Ceramic restorations.</b>	All-Ceramic Restorations, Types, and Technique, Platinum Foil and Aluminum Core: Slip-Cast Alumina Crown and FPDs: Heat-Pressed Ceramic: Castable-Ceramic Restorations: CAD-CAM Ceramic Restoration:	2	4
5	<b>Zirconia Ceramic</b>	Historical Background, Chemical Composition of Y-TZP Zirconia Crystals Forms and Transformation toughing. The Indication and Uses of Zirconia Ceramic. Advantages and Disadvantages of Zirconia Ceramic. Special consideration of all ceramic preparation and restorations.	2	4
6	<b>Zirconia Ceramic Continue</b>	Laboratory Procedures of Zirconia Ceramic (Two steps): Framework Fabrication.	1	2

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
		Ceramic-veneer Fabrication. CAD/CAM, Milling-Technique. Manual Milling-Technique.		
7	Laminate veneers	Defecation, Types, Indications, Contra- indications, Advantages and Disadvantages of Laminate veneers.	1	2
8	Mid – term Exam		1	2
9	Laminate veneers	Clinical and laboratory procedures of Ceramic Laminate veneers (Direct and indirect Techniques). Cementation. Maintenance.	1	2
10	Shade Selection	– Defecation, Dimensions of Color, Technique for shade selection,	1	2
11	Intra-coronal Restorations.	Definitions, Inlay, Onlay, Overlay. Endo-crown – Indications, tooth preparations for all types.	1	2
12	Esthetic Problem Solving in Fixed Prosthodontics	Diastema, Spacing, Crowding, Tilting, Over-Erupted, Discolorations, teeth wearing.	1	2
13	The Final Review.	The teacher's answer for any question from any student in any topic.	1	2
16	The Final Exam	...	1	2
Number of Weeks /and Units Per Semester			16	32

**B. Practical Aspect (Lab/Clinical) (if any):**

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
1	Introduction and Demonstration about the Dental Clinic that will be use in the clinical procedures of Fixed prosthodontics.	1	2
2	Conduct a clinical examination and fill out a Case Sheet, the student takes the primary impression and made (two) Study cast (Diagnostic Cast), the first one was kept as a reference. For the second, it is installed on a regular applicator with an example of the corresponding teeth (Simple Articulator), and the tooth are prepared for posterior metal – ceramic crown.	2	4
3	- The patient is brought, along with a case sheet, radiograph, temporary, study casts, and the supervisor is called to give permission (Starting) to begin work in the mouth, starting with taking the color (Color Selection). Then anesthetize the patient and begin preparation, after tooth preparation, make (Gingival Retraction) and take the final impression. Using silicon, the bite is taken (bite recording), then the provisional (temporary) crown or bride is installed correctly.	2	4
4	Gently remove the temporary, and when the patient experiences pain, he is anesthetized to perform the metal try-in, then reinstall the temporary.	1	2
5	Gently remove the temporary one, and try-in the metal-ceramic prosthesis. After that, the final glaze is performed. Then the final prosthesis is installed in the patient's mouth with final or temporary cement (depending on the case), then the procedure is done. An x-ray of the case and confirm it with the previous x-rays in the Case Sheet.	1	2
6	Conduct a clinical examination and fill out a Case Sheet, primary impression and made (two) Study cast the first and second as the previous and the tooth are prepared for anterior metal – ceramic crown.	1	2
7	The patient is brought, along with a case sheet, radiograph, temporary, study casts, starting with taking the color, then anesthetize the patient and begin preparation, after tooth preparation, make gingival retraction and take the final impression, the bite is taken and the temporary anterior crown or bride is inserted correctly.	1	2
8	Gently remove the temporary, perform the metal try-in, then reinstall the temporary.	1	2
9	Gently remove the temporary, try-in the metal-ceramic prosthesis. After that, the final glaze is performed. Then the	1	2

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
	final prosthesis is inserted and the permanent or temporary cement, then the procedure is done as the previous case.		
10	- Fiber Post Crown Fabrication in the patient mouth.	2	4
11	- -Final Practical Exam	1	2
<b>Number of Weeks /and Units Per Semester</b>		<b>14</b>	<b>28</b>

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
1	Introduction and Demonstration about the Dental Clinic that will be use in the clinical procedures of Fixed prosthodontics.	1	2
2	Conduct a clinical examination and fill out a Case Sheet, the student takes the primary impression and made (two) Study cast (Diagnostic Cast), the first one was kept as a reference. For the second, it is installed on a regular applicator with an example of the corresponding teeth (Simple Articulator), and the tooth are prepared for posterior metal – ceramic crown.	2	4
3	The patient is brought, along with a case sheet, radiograph, temporary, study casts, and the supervisor is called to give permission (Starting) to begin work in the mouth, starting with taking the color (Color Selection). Then anesthetize the patient and begin preparation, after tooth preparation, make (Gingival Retraction) and take the final impression. Using silicon, the bite is taken (bite recording), then the provisional (temporary) crown or bride is installed correctly.	2	4
4	Gently remove the temporary, and when the patient experiences pain, he is anesthetized to perform the metal try-in, then reinstall the temporary.	1	2
5	Gently remove the temporary one, and try-in the metal-ceramic prosthesis. After that, the final glaze is performed. Then the final prosthesis is installed in the patient's mouth with final or temporary cement (depending on the case), then the procedure is done. An x-ray of the case and confirm it with the previous x-rays in the Case Sheet.	1	2
6	Conduct a clinical examination and fill out a Case Sheet, primary impression and made (two) Study cast the first and second as the previous and the tooth are prepared for anterior metal – ceramic crown.	1	2
7	The patient is brought, along with a case sheet, radiograph, temporary, study casts, starting with taking the color, then anesthetize the patient and begin preparation, after tooth preparation, make gingival retraction and take the final impression, the bite is taken and the temporary anterior crown or bride is inserted correctly.	1	2
8	Gently remove the temporary, perform the metal try-in, then reinstall the temporary.	1	2

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
9	Gently remove the temporary, try-in the metal-ceramic prosthesis. After that, the final glaze is performed. Then the final prosthesis is inserted and the permanent or temporary cement, then the procedure is done as the previous case.	1	2
10	- Fiber Post Crown Fabrication in the patient mouth.	2	4
14	- -Final Practical Exam	1	2
<b>Number of Weeks /and Units Per Semester</b>		<b>14</b>	<b>28</b>
No.	Tasks/ Experiments	Number of Weeks	Contact Hours
1	Introduction and Demonstration about the Dental Clinic that will be use in the clinical procedures of Fixed prosthodontics.	1	2
2	Conduct a clinical examination and fill out a Case Sheet, the student takes the primary impression and made (two) Study cast (Diagnostic Cast), the first one was kept as a reference. For the second, it is installed on a regular applicator with an example of the corresponding teeth (Simple Articulator), and the tooth are prepared for posterior metal – ceramic crown.	2	4
3	The patient is brought, along with a case sheet, radiograph, temporary, study casts, and the supervisor is called to give permission (Starting) to begin work in the mouth, starting with taking the color (Color Selection). Then anesthetize the patient and begin preparation, after tooth preparation, make (Gingival Retraction) and take the final impression. Using silicon, the bite is taken (bite recording), then the provisional (temporary) crown or bride is installed correctly.	2	4
4	Gently remove the temporary, and when the patient experiences pain, he is anesthetized to perform the metal try-in, then reinstall the temporary.	1	2
5	Gently remove the temporary one, and try-in the metal-ceramic prosthesis. After that, the final glaze is performed. Then the final prosthesis is installed in the patient's mouth with final or temporary cement (depending on the case), then the procedure is done. An x-ray of the case and confirm it with the previous x-rays in the Case Sheet.	1	2
6	Conduct a clinical examination and fill out a Case Sheet, primary impression and made (two) Study cast the first and second as the previous and the tooth are prepared for anterior metal – ceramic crown.	1	2
7	The patient is brought, along with a case sheet, radiograph, temporary, study casts, starting with taking the color, then anesthetize the patient and begin preparation, after tooth preparation, make gingival retraction and take the final impression, the bite is taken and the temporary anterior crown or bride is inserted correctly.	1	2

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
8	Gently remove the temporary, perform the metal try-in, then reinstall the temporary.	1	2
9	Gently remove the temporary, try-in the metal-ceramic prosthesis. After that, the final glaze is performed. Then the final prosthesis is inserted and the permanent or temporary cement, then the procedure is done as the previous case.	1	2
10	- Fiber Post Crown Fabrication in the patient mouth.	2	4
14	- -Final Practical Exam	1	2
<b>Number of Weeks /and Units Per Semester</b>		<b>14</b>	<b>28</b>

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## VI. Teaching Strategies of the Course:

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## VII. Assessment Methods of the Course:

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Assignments:				
No	Assignments	Week Due	Mark	Proportion of Final Assessment
1	-Technical/Practical reports about the clinical and laboratory procedures of crown and fiber and Custom-made post crown construction.	All Weeks	5	5 %
2	-Presentations: The Digital Dentistry and IA in Fixed Prosthodontics Practices.	All Weeks	5	5 %
<b>Total</b>			<b>10</b>	<b>10 %</b>

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## IX. Schedule of Assessment Tasks for Students During the Semester:

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## XI. Course Policies: (Based on the Uniform Students' Bylaw (2007))

1	Class Attendance:
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	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	<b>Tardiness:</b> A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	<b>Exam Attendance/Punctuality:</b> 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	<b>Assignments &amp; Projects:</b> Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	<b>Cheating:</b> 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	<b>Forgery and Impersonation:</b> 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	<b>Other policies:</b> 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.