Course Specifications

Course Title:	**Pre-Clinical Fixed Prosthodontics**
Course Code:	**SDS 323**
Program:	**Bachelor of Dentistry [BDS]**
Department:	**Pre-Clinical Fixed Prosthodontics**
College:	**College of Dentistry**
Institution:	**Majmaah University**

Table of Contents

A. Course Identification

1. Credit hours:	**4** (2+2)
2. Course type	
a.	University ☐ College ☐ Department **X** Others ☐
b.	Required **X** Elective ☐
3. Level/year at which this course is offered:	**3rd Year / 1st and 2nd Semester**
4. Pre-requisites for this course (if any)**:**	**SDS212**
5. Co-requisites for this course (if any)**:**	**NA**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	30	25 %
2	**Blended**	NA	NA
3	**E-learning**	NA	NA
4	**Correspondence**	NA	NA
5	**Other - Laboratory**	90	75%

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	**30**
2	**Laboratory/Studio**	**90**
3	**Tutorial**	**-**
4	**Others** (specify) **/Clinic**	**-**
	Total	**120**
Other Learning Hours*		
1	**Study**	**45**
2	**Assignments**	**15**
3	**Library**	**15**
4	**Projects/Research Essays/Theses**	**-**
5	**Others** (specify)	**-**
	Total	**75**

* 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 represents the orientation phase to the discipline of Fixed Prosthodontics.It provides a structured framework for the students to learn the scientific basis and fundamental principles of Fixed Prosthodontics. It prepares the student for the practice of sound clinical Fixed Prosthodontics through a pre-clinical phase of mechanical and technical procedures.

2. Course Main Objectives

1. Demonstrate basic knowledge of principles and technique pertaining to the treatment of partially edentulous patients.
2. Diagnose and treatment plan partially edentulous cases for proper Prosthodontic restoration of form and function.
3. Provide current information on standards of care for the management of patients requiring Fixed prosthodontic treatment.
4. Perform all preclinical procedures required to design/fabricate a Fixed partial denture & prepare the teeth for final delivery of prosthesis.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge:**	
K1.14	Define, describe, classify and identify the different dental techniques, concepts, procedures and materials for fixed prosthesis.	K1
2	**Skills :**	
S1.14	Correlate between functions & components of different oral structures, dental techniques, concepts, procedures and materials for fixed prosthesis.	S1
S6.8	Demonstrate and perform skills for hands-eye coordination during various pre-clinical procedures and techniques for fabrication and repairing of various fixed prosthesis.	S6
3	**Competence:**	
C2.14	Demonstrate collaborative teamwork and leadership spirit during learning, performing & using various fixed prosthetic options, techniques, materials, instruments, equipment & procedures.	C2

C. Course Content

No	List of Topics	Contact Hours

(1)	**Introduction and orientation.** • Contents, guidelines, assessment tools, do's and don'ts in this semester. • Types of FPD. • Indications and contraindications in FPD • Steps involved in fabricating fixed partial denture.	1
(2)	**Alginate impression and diagnostic cast.** • Objectives of impression making for FPDs. • Materials used for making impression for FPDs and in detail about alginate. • Applications of diagnostic casts in FPDs.	1
(3 & 4)	**Principles of tooth preparation.** • Classification of principles of teeth preparation. • Biological, mechanical and aesthetic considerations of teeth preparation. • Definition of retention and resistance in fixed partial dentures. • Factors affecting retention and resistance in FPDs.	2
(5)	**Retention and resistance and its theoretical and Practical attainment.** • Definition of retention and resistance in fixed partial dentures. • Factors affecting retention and resistance in FPDs.	1
(6 & 7)	**Complete cast metal crown & Metal ceramic crown preparation** • Definition of metal ceramic crowns. • Conditions demanding metal ceramic crowns. • Steps for preparing metal ceramic crowns for anterior and posterior teeth.	2
(8)	**All ceramic crowns.** • All ceramic crowns. • Classification of all ceramic crowns. • Steps for preparing all ceramic crowns.	1
(9)	**Introduction to ceramics and metal ceramic restoration.** • Definition of ceramic and metal ceramic crowns. • Conditions demanding ceramic and metal ceramic crowns. • Steps for preparing ceramic and metal ceramic crowns for anterior and posterior teeth.	1

(10)	**Fabrication of working cast and dies.** • Definition of a die • Classification of die system. • Steps involved in preparing dies.	1
(11&12)	**Waxing patterns** **(Wax-up procedure, cut back and framework design for metal ceramic restoration.)** • Definition of wax patterns. • Classification of the techniques of wax pattern. • Direct and indirect techniques of wax pattern • Steps involved in wax-up for FPDs. • Cut-back technique • Framework design for metal ceramic restorations.	2
(13&14)	**Investing and casting.** • Steps involved in investing for FPDs. • Steps involved in casting for FPDs.	2
(15)	**Revision**	1
	SECOND SEMESTER	
(1 & 2)	**Preparation for porcelain laminate veneers.** • Definition- porcelain laminates veneer. • Types of veneers. • Conditions demanding porcelain laminate veneers • Steps for preparing porcelain laminate veneers	2
(3)	**Preparation of extensively damaged vital teeth.** • Precautions during preparation of extensively damaged vital teeth. • Modified restorations for extensively damaged vital teeth. • Grooves • Pins • Box forms	1
(4)	**Provisional restoration.** • Ideal requirements of provisional restoration. • Types of provisional restoration. • Limitation of provisional restoration.	1
(5)	**Restoration of Endodontically treated teeth**	

	• Definition. • Types or classifications • Procedures	1
(6)	**Alloys used in fabricating metal ceramic restoration.** • Classification of dental porcelain based on firing temperature. • Classification of types of alloys used in fabricating metal ceramic restoration. • Criteria for using particular type of alloys to fabricate metal ceramic restoration	1
(7)	**Preparation of metal coping for porcelain application.** • Wax pattern fabrication. • Technique of fabrication of wax pattern. • Technique of coping preparation.	1
(8)	**Pontic design.** • Definition of pontic. • Classification of pontic. • Requirements of pontic. • Factors affecting designs of pontic.	1
(9)	**Porcelain application, staining, glazing and polishing of metal ceramic restoration.** • Steps of porcelain application. • Staining**.** • Glazing**.** • Polishing of metal ceramic restoration.	1
(10)	**Fitting, finishing and delivery of cast restoration.** • Fitting and polishing of cast restorations • Cementation. Post cementation instruction.	1
(11)	**Solder joints and other connectors.** • Definition. • Types of soldering. • Soldering techniques of joint connectors. • Types of other connectors.	1
(12&13)	**Resin bonded fixed partial denture.** • Definition • Indications and contraindications • Advantages and disadvantasge	2

	• Types • Technique of fabrication	
(14&15)	**Recent advances in fixed prosthodontics.** • Recent advances in dental ceramic. • Recent advances in techniques of fabrication of dental ceramic. • Recent advances in metal ceramic.	2
	Total	30

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	**Knowledge**		
K1.14	Define, describe, classify and identify the different dental techniques, concepts, procedures and materials for fixed prosthesis.	Lectures with PBL, lab sessions	Written exams , Oral Exam, OSPE,OSCE, Assignments, Practical Exam
2	**Skills :**		
S1.14	Correlate between functions & components of different oral structures, dental techniques, concepts, procedures and materials for fixed prosthesis.	Lectures with PBL, lab sessions	Written exams; Oral Exam; Weekly assessment
S6.8	Demonstrate and perform skills for hands-eye coordination during various pre-clinical procedures and techniques for fabrication and repairing of various fixed prosthesis.	Lab Session	Practical exam, Weekly assessment
3	**Competence:**		
C2.14	Demonstrate collaborative teamwork and leadership spirit during learning, performing & using various fixed prosthetic options, techniques, materials, instruments, equipment & procedures.	Lab Session	Approved procedures documented in logbook, Assignments

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Professionalism	During the course	5%
2	Quiz	During the course	5%
3	Midyear Theory Exam	During the course	20%
4	Midyear Practical Exam	During the course	20%

#	Assessment task*	Week Due	Percentage of Total Assessment Score
5	Weekly Practical assessments	During the course	10%
6	Final practical Exam	During the course	20%
7	Final Theory Exam	End of the session	20%

***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 :
The student shall avail the consultancy during the displayed office hours

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	✓ Fundamentals of Fixed Prosthodontics, Herbert T. Shillingberg-4th edition ✓ Contemporary Fixed Prosthodontics, Stephen F. Rosenstiel-4th edition
Essential References Materials	✓ Journal Of Prosthetic Dentistry ✓ International Journal Of Prosthetic Dentistry
Electronic Materials	None
Other Learning Materials	None

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	✓ Lecture room suitable for 30 students ✓ Fully equipped lab for practical sessions
Technology Resources (AV, data show, Smart Board, software, etc.)	✓ 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)	✓ Equipped dental units.

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students	✓ Course Evaluation Survey ✓ Quality of Exam Survey

Evaluation Areas/Issues	Evaluators	Evaluation Methods
	Faculty	✓ 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	✓ Direct assessment outcome analysis ✓ Course report preparation
Quality of learning resources, etc	Students / Faculty	✓ 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	**26/08/1440**