

Jordan University of Science and Technology
Faculty of Applied Medical Sciences
Department of Applied Dental Sciences
2013/2014

Course Information	
Course Title	Fixed Prosthodontics II
Course Number	TDEN333
Prerequisites	TDEN232
Course coordinator	Maha Alomari, BSc, MDSc
Co. instructor	Alina Al Twal, BSc, MDSc
Office Location	Faculty of Applied Medical Sciences/ 2 nd floor
Office Phone	02/ 7201000 ext. (26885)
Office Hours	TBA
email	maalomari2@just.edu.jo
Teaching Assistants	Supervisors of dental technology laboratory
Course Description	
<p>This course is designed to the undergraduate students at the third year and it is four Credit hours (1Cr Theoretical, 3Cr Practical). The course will provide the students with:</p> <ul style="list-style-type: none"> • The necessary training on the various laboratory steps involved in the fabrication of metal ceramic fixed partial dentures and crowns. • In addition to a theoretical background which includes explanations to technical and clinical aspects of metal ceramic fixed prostheses. 	
Feedback	
<p>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 lecture, notes on the content of the course, its teaching and assessment methods can be also sent by e-mail</p>	

Text Book	
Title	Contemporary Fixed Prosthodontics
Author(s)	Rosentiel S F, Land M F & Fujimoto J.
Publisher	Mosby
Year	2006
Edition	4 th
Other References	1. Makoto Yamamoto. 1985. Metal Ceramics: Principles and methods of Makoto Yamamoto. 2 nd

	Edition. Quintessence 2. Shillingburg H T <i>et al.</i> 1997. Fundamentals of Fixed Prosthodontics. 3 rd Edition. Quintessence
--	--

Course Objectives		Weights
1-To provide the students with sufficient theoretical background to guide them while constructing the metal-ceramic fixed partial dentures and crowns		30%
2- To train the students to handle the equipments and materials used in the construction of restorations in the proper way.		10%
3-To provide training on the various laboratory steps involved in the fabrication of the metal-ceramic fixed partial dentures and crowns.		60%
Assessment Policy		
Assessment Type and Expected Due Date	Weight	
Theory Midterm Exam Week 9	15%	
Theory Final Exam	15%	
Lab Continuous Assessment *	45%	
Practical Final Exam Week 15	25%	

* includes lab works and quizzes

Teaching & Learning Methods
<p>There will be a weekly lecture for 1hour, and one weekly lab for 6 hours during which a demonstration will be given for half an hour, followed by individual supervised lab sessions.</p> <p>Students will perform a finished two metal-ceramic crowns, and finished one three-unit metal-ceramic FPD from A to Z at lab .At the end of each lab they will be assessed by the instructor and dental technology supervisors.</p>

Course Content (Theory)			
Date/ Week	Topic	Chapter in Text / handouts	Lecturer
Week 1	Course orientation	Syllabus distribution	Maha Alomari
Week 2	Wax pattern – framework design for Metal Ceramic Restoration (MCR)	Sections in chapters 18 + 19	Maha Alomari
Week 3	Pontic design of MCR	Chapter 20	Maha Alomari
Week 4	MCR fabrication – Metal preparation	Chapter 24	Maha Alomari
Week 5	Material science of porcelain porcelain application I &	Chapter 24	Maha Alomari
Week 6	Porcelain application II & porcelain labial margin	Chapter 24	Maha Alomari
Week 7	Colour-replication process & aesthetic I	Chapter 23***	Maha Alomari
Week 8	Colour-replication process & aesthetic II	Chapter 23***	Maha Alomari
Week 9	Midterm Exam	Study Hard	Maha Alomari
Week 10	Dentist to technician communication – responsibilities	Chapter 16	Maha Alomari
Week 11	Material selection for MCR – Metal, casting alloy, investment & porcelain	Sections in chapters 19 + 22 + 24	Maha Alomari
Week 12	Porcelain-Alloy bonding	Chapter 24 + handouts*	Alina Al Twal
Week 13	Porcelain condensation I	Chapter 4 (Yamamoto)	Alina Al Twal
Week 14	Porcelain condensation II	Chapter 4 (Yamamoto)	Alina Al Twal
Week 15	Porcelain furnaces & porcelain troubleshooting	handouts	Alina Al Twal
Week 16	Final Exam		Maha Alomari & Alina Al Twal

* summarization from Yamamoto, M (1985)- Chapter 1

** summarization from Yamamoto, M (1985)- Chapter 3

*** With extra information in the handouts

Course Content (Lab)	
Week	Topic
1	Cast preparation & mounting
2	Die preparation
3	full wax up of Central with rubber index
4	Holiday (عيد الأضحى المبارك)
5	Cut back of Central, spruing & investing
6	Metal Finishing of Central & opaque application
7	Porcelain build up of Central
8	Wax up/Cut back of Molar, spruing & investing
9	Metal Finishing Molar & opaque application
10	Porcelain build up of Molar
11	Full wax up of bridge
12	Cut back of Bridge, spruing & investing (1 st & 2 nd premolars will be fully covered with ling. collar, 1 st molar will be faced lab.)
13	Metal Finishing of Bridge & opaque application
14	Porcelain build up of Bridge /Preparation for final practical exam
15	Porcelain build up of Bridge /Preparation for final practical exam
16	Final practical exam

Laboratory continuous assessment sheet	
Requirements	marks
1. Working cast & die prep	(20%)
A- prepared teeth (dies)	
* smooth	/ 1
* finish lines	/ 5
* easily removed	/ 2
B- unprepared dies	
* smooth	/ 1
* easily removed	/ 2
C- cast	
* pins types & position	/ 2
* no damages or broken parts	/ 1
* width & height of cast	/ 2
* horse shaped cast	/ 1
D- base	
* pins & sleeves	/ 1
* stable & easily removed	/ 1
* trimming of base	/ 1
2. Mounting	(10%)
1- pin in midline	/ 1
2- smooth	/ 1
3- stable	/ 1
4- position of cast in articulator	/ 2
5- correct bite	/ 1
6- clean, no excess	/ 2
7- definitive line between plaster & base	/ 2
3. Full wax up of central	(5%)

1- margins	/ 1
2- incisal edge and occlusion	/1
3- axial contour	/ 1
4- contact points	/2
4. cut back of central	(10%)
1- margins	/ 3
2- thickness (occlusal clearance)	/ 2
3- contour	/ 2
4- smooth	/ 1
5- colar (position & thickness)	/ 1
6- butt joint (C-M joint)	/ 1
* colar	/ 1
* butt joint	/ 1
* thickness	/ 2
5-Porcelain buildup of central	(10%) (total/2)
1- contour	/ 2
2- occlusion	/ 1
3- morphology	/ 2
4- contact points	/ 2
5- margin	/ 2
6- shade	
* layers (enamel & dentine)	/ 1
* metal coverage by opaque	/ 1
* matching with shade guide	/ 1
7- fitting, sandblasting of fitting surface & colar polishing	/ 2
8- errors , cracks & pits	/ 1
7- cut back of Molar	(10%)
1- margins	/ 3
2- thickness (occlusal clearance)	1- / 2
3- contour	2- / 2
4- smooth	3- / 1
5- colar (position & thickness)	4- / 1
6- butt joint (C-M joint)	5- / 1
8- Fitting & finishing of Molar	(10%)
1- fitting	/ 2
2- margins	/ 2
3- finishing	
* contour	/ 1
* no sharp edges –	/ 1
* same direction preperation	/ 1
* colar	/ 1
* butt joint	/ 2
9- Porcelain buildup of Molar	(10%) (total/2)
1- contour	/ 2
2- occlusion	/ 1
3- morphology	/ 2
4- contact points	/ 2

5- margin	/ 2
6- shade	
* layers (enamel & dentine)	/ 1
* metal coverage by opaque	/ 1
* matching with shade guide	/ 1
7- fitting, sandblasting of fitting surface & colar polishing	/ 2
8- errors , cracks & pits	/ 1
10- Waxing of posterior bridge	(20%)
1- retainers (1st premolar & 1st molar)	
* contour & contact points	/2
* occlusion & morphology	/3
* margins	/2
* thickness (labial clearance)	/2
2- pontic	
* design (B&L) modified ridge lap	/1
* contour, occlusion & morphology	/2
3- connectors	
* U shaped	/1
* position	/1
* thickness	/1
4- general	
* butt joint & chamfer finish line	/3
* smoothness	/2
11- Fitting & finishing of posterior bridge	(20%)
1- fitting	
* margins	/ 4
* no rocking	/ 1
* not loose	/ 1
2- finishing	
* contour & contact points	/ 3
* no sharp edges - same direction preperation	/ 2
* butt joint	/ 2
* labial chamfer finish line	/2
* thickness of veneering area	/2
* occlusion & morphology	/2
* polishing	/1
12- Porcelain buildup of the post. bridge	(10%)
1- contour	/ 3
2- separation between teeth	/ 1
3- occlusion	/ 2
4- morphology	/1
5- shade	
* layers (enamel & dentine)	/1
* metal coverage by opaque	/1
* matching with shade guide	/1

Additional Notes

Exams	Students are required to sit for the 2 semester theory exams (mid-term and final) in addition to the final practical exam.
Cheating	Cheating during exam will result in dismissal from the exam hall and the student will be penalized according to JUST regulations.
Attendance	<ul style="list-style-type: none">- The students are expected to attend at least 90% of the sessions in order to pass the course.JUST requires the faculty member to assign ZERO grade (35%) if a student misses 10% of the classes without an excuse.- Sign in sheet will be distributed at the beginning of the lecture.- Questions are welcome during lectures.
Assessment	Assessment policy is subject to change because those changes might occur during the semester.