



Jordan University of Science and Technology
Faculty of Dentistry
Dental Surgery Department

DENT766 Advanced Prosthodontics (2) - JNQF Level: 9

Second Semester 2023-2024

Course Catalog

2 Credit Hours. This seminar-based theoretical course delves deep into the contemporary literature on fixed prosthodontics, providing students with an advanced understanding of the latest principles and techniques. The course covers essential topics such as the design and biomechanical planning of fixed prostheses, the latest methodologies for tooth preparation, and innovations in fluid control and impression-making for optimal clinical outcomes. Students will critically explore the use of interim restorations, aesthetic considerations in shade matching, and modern cementation techniques for both temporary and permanent prostheses. Restoring endodontically treated teeth and understanding the complex relationship between periodontal health and restorative treatments will be covered comprehensively. The course also investigates cutting-edge advancements in dental ceramics and resin-based material, with a focus on their clinical applications and long-term performance. Advancements in adhesive dentistry and digital technologies, including CAD/CAM systems and 3D printing, will be analyzed for their transformative role in prosthodontics. Full-mouth rehabilitation strategies and the management of tooth wear are key components, alongside discussions on the prevention and repair of prosthetic failures.

Teaching Method: Blended

Text Book

Title	Fundamentals of Fixed Prosthodontics
Author(s)	Herbert T. Shillingburg jr. / David A. Sather / Edwin L. Wilson jr. / Joseph R. Cain / Donald L. Mitchell / Luis J. Blanco / James C. Kessler
Edition	4th Edition
Short Name	Ref. No. 1
Other Information	Quintessence

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref. No. 2	Contemporary Fixed Prosthodontics	Stephen F. Rosenstiel, Martin F. Land, Robert Walter	6th Edition	Elsevier
Ref. No.3	Planning And Making Crowns And Bridges	Bernard G. N. Smith, Leslie C. Howe	4th Edition	Routledge/Taylor & Francis Group
Ref. No.4	Fundamentals of Tooth Preparations for Cast Metal and Porcelain Restorations	Herbert T. Shillingburg Jr., Richard Jacobi, Susan E. Brackett	1st Edition	Quintessence
Ref. No.5	Attachments for Prosthetic Dentistry: Introduction and Application	Michael Sherring-Lucas, Paul Martin	1st Edition	Quintessence

Instructor

Name	Prof. Ahed Al-Wahadni
Office Location	234
Office Hours	
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Class Schedule & Room

Section 1:
 Lecture Time: Wed : 09:15 - 10:15
 Room: MASTER HALL2

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	Designing and Planning Fixed prosthesis	From Ref. No. 1 , From Ref. No. 2 , From Ref. No.3
Week 2	Biomechanical Principles of Tooth preparation	From Ref. No. 1 , From Ref. No. 2 , From Ref. No.3 , From Ref. No.4
Week 3	Fluid Control, Soft Tissue Management and Impression making	From Ref. No. 1 , From Ref. No. 2
Week 4	Interim Fixed Restorations	From Ref. No. 1 , From Ref. No. 2

Week 5	Aesthetic Considerations and Shade Matching	From Ref. No. 1, From Ref. No. 2
Week 6	Cementation of Interim and Fixed Prosthesis	From Ref. No. 1, From Ref. No. 2
Week 7	Restoration of the Endodontically Treated Teeth	From Ref. No. 1, From Ref. No. 2, From Ref. No.3
Week 8	Perio-Restorative relationship	From Ref. No. 1, From Ref. No. 2
Week 9	Dental Ceramics and Resin-ceramic materials	
Week 10	Adhesive Dentistry	From Ref. No. 1, From Ref. No. 2
Week 11	Digital Dentistry	From Ref. No. 1, From Ref. No. 2
Week 12	Full Mouth Rehabilitation and Tooth Wear Management	From Ref. No. 1, From Ref. No. 2
Week 13	Fixed Prosthesis Failures and Repairs	From Ref. No. 1, From Ref. No. 2, From Ref. No.5

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Critically evaluate contemporary research literature on fixed prosthodontics, including key principles of tooth preparation, and apply evidence-based insights to clinical decision-making in crown and bridge design. [1PLO_9K2] [1L9K2]	15%	
Analyze the biological, mechanical, and aesthetic principles that guide the design and execution of tooth preparations for fixed prostheses, including considerations for preserving tooth structure and pulpal health. [1PLO_9K1] [1L9K1]	15%	
Recognize the biomechanical factors involved in optimal crown and bridge preparation, including retention, resistance, and margin design, and assess how these criteria influence the long-term success of prosthetic restorations. [1PLO_9K1] [1L9K1]	15%	
Examine current advances in restorative materials, including dental ceramics and resin-ceramics, and evaluate how material properties influence preparation design, margin selection, and clinical outcomes. [1PLO_9K1] [1L9K1]	10%	
Critically assess the role of occlusion and functional loading in fixed prosthodontics, and develop strategies to incorporate occlusal principles in preparation and design to optimize prosthesis longevity and patient function. [1PLO_9K2] [1L9K2]	10%	
Explore the integration of digital technologies, such as CAD/CAM systems and 3D printing, in fixed prosthodontics, and evaluate the impact of these innovations on clinical workflow, precision, and patient outcomes. [1PLO_9S1] [1L9S1]	10%	
Investigate common causes of failure in fixed prosthodontics and develop evidence-based approaches to repair and manage complications in clinical practice. [1PLO_9S3] [1L9S3]	10%	
Demonstrate a patient-centered approach to prosthodontic treatment planning, incorporating ethical considerations, patient-specific factors such as aesthetics and function, and communication strategies. [1PLO_9K2] [1L9K2]	15%	

1.1 Scientific Knowledge and Cognitive Skills	1.2 Scientific Knowledge and Cognitive Skills	1.3 Scientific Knowledge and Cognitive Skills	1.4 Scientific Knowledge and Cognitive Skills	1.5 Scientific Knowledge and Cognitive Skills	1.6 Scientific Knowledge and Cognitive Skills	1.7 Scientific Knowledge and Cognitive Skills	2.1 Person-Centred Care	2.2 Person-Centred Care	2.3 Person-Centred Care	2.4 Person-Centred Care	3.1 Responsibility, Communication, Professionalism and Ethics	3.2 Responsibility, Communication, Professionalism and Ethics	3.3 Responsibility, Communication, Professionalism and Ethics

Relationship to NQF Outcomes (Out of 100%)			
L9K1	L9K2	L9S1	L9S3
40	40	10	10

Evaluation	
Assessment Tool	Weight
Intr semester exam	25%
participation	5%
seminare presentation	20%
final	50%

Policy

Assessment	<p>Intra-Semester Exam: 25% Seminar Presentation: 20% Participation: 5% Final Exam: 50%</p> <p>Every student will have (a) seminar(s) assigned to him, making him the seminar manager. The course director will give the students soft copies of the materials.</p> <p>Organizing the seminar will be the primary duty of the seminar manager.</p> <p>It is recommended that fellow students get organized, peruse the assigned readings, and engage fully in the seminars.</p>
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