

Prosthodontics II

Fixed Prosthodontics II

Course Title: Fixed Restorative Prosthodontics II

Course Number: DEH 334

Credit Hours: 1+3=4

Pre-Requisite: DEH 211/DEH 217

Course Description

As a continuation of introduction to fixed prosthodontics, students will fabricate single unit metal restorations as prescribed. This course expands upon the theory base of the previous semesters and will enhance the student's ability to waxing of multiple units' restoration, soldering, and the repair of restorations. Topics also include resin veneers, temporary crowns, post-core crowns, inlays, onlays and partial crowns and principles of occlusion

COURSE OBJECTIVES:

1. Apply laboratory procedures and guidelines related to the use and maintenance of lab equipment and instruments used in this course.
2. Identify the safe use and maintenance of equipment and instruments introduced for use in this semester
3. Identify the properties of the dental materials used for the fabrication of fixed restorations, including principles of safety and manipulation.
4. Identify the effects of ceramo/metal restorative materials on the oral tissues
5. Describe and practice the principles for correcting and repairing single unit metal restorations by soldering gold alloys
6. Recall knowledge about fabrication principles and techniques for single metal restorations.

7. Recall principles and techniques for fabricating single unit ceramo/metal restorations.
8. Identify metal post crowns, including principles relating to their design and fabrication.
9. Fabricate post metal crowns as prescribed
10. Identify inlays, onlays and partial crowns, including principles relating to their fabrication
11. Fabricate inlays, onlays and partial crowns as prescribed
12. Recall knowledge about esthetics, form and function relating to tooth contour and margin preparations of single unit metal restorations.
13. Identify purposes of a fixed bridge and types of fixed bridges including their component parts
14. Identify terminology relating to fixed bridges, including component parts.
15. Identify design requirements of a pontic and its types
16. Identify the effects of various pontic designs on oral soft and hard tissues.
17. Describe principles relating to the fabrication of various types of multiple unit restorations, including temporary bridges and alternative waxing and casting techniques.
18. Identify modifications to single unit metal restoration techniques for the processing and finishing of multiple unit metal restorations.
19. Practice principles for investing wax patterns for multiple unit metal restorations.
20. Describe the sequencing of clinical and laboratory procedures for the fabrication of multiple unit restorations.

21. Describe esthetics, form and function relating to multiple unit fixed restorations.
22. Identify the occlusal requirements of multiples unit restorations to withstand functional forces of mastication.
23. Identify temporary bridges including principles related to their fabrication
24. Fabricate hygienic bridges including principles relating to their fabrication
25. Identify oral hygiene aids recommended for patients with multiple restorations and their influence on pontic design.
26. Identify principles for polishing and cleaning finished full metal restorations
27. Describe splints including principles relating to their fabrication
28. Discuss principles related to soldering individually cast components of a multiple unit restoration.
29. Identify esthetic design requirements of ceramo/metal restorations
30. Practice the principles and techniques relating to the fabrication of ceramo/metal bridge restorations.
31. Identify principles relating to the preparation of the metal interface for a ceramo/metal restoration
32. Fabricate ceramo/metal restorations as prescribed.

Course outline

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| Week 1 | <p>Introduction of the safe use and maintenance of equipment and instruments</p> <p>A. One hour classroom lecture</p> |
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| Week 2 | <p>Define ceramo/metal restorative materials and its effects on the oral tissues</p> <p>A. One hour classroom lecture</p> |
| Week 3 and 4 | <p>Principles for correcting and repairing single unit metal restorations by soldering gold alloys</p> <p>A. One hour classroom lecture B. One hour laboratory demonstration</p> |
| Week 5 and 6 | <p>Design and fabrication of metal post crowns inlays, onlays and partial crowns</p> <p>A. One hour classroom lecture B. One hour laboratory demonstration</p> |
| Week 7 | Mid term exam 1 |
| Week 8 | <p>Define the fixed bridge and its types</p> <p>A. One hour classroom lecture B. One hour laboratory demonstration</p> |
| Week 9 | <p>Designs of pontic and its effects on oral soft and hard tissues.</p> <p>A. One hour classroom lecture B. One hour laboratory demonstration</p> |
| Week 10 | <p>Principles and techniques of fabrication of multiple unit fixed restorations and ceramo/metal bridge restorations (Spruing and investing wax pattern)</p> <p>A. One hour classroom lecture B. One hour laboratory demonstration</p> |
| Week 11 | <p>Principles for polishing and cleaning finished full metal restorations and metal interface for a ceramo/metal restoration</p> <p>A. One hour classroom lecture B. One hour laboratory demonstration</p> |
| Week 12 | <p>Define splints and principles for fabrication</p> <p>A. One hour classroom lecture B. One hour laboratory demonstration</p> |
| Week 13 | Mid term exam 2 |

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| Week 14 | Soldering of a multiple unit restoration and single crown A. One hour classroom lecture B. One hour laboratory demonstration |
| Week 15 | Revision |
| Week 16 | Final exam |

Teaching methods:

Classroom lecture

Practical at the lab

Evaluation:

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| 2 mid term exam | 20% |
| Practical exam | 30% |
| Attendance | 5% |
| Lab bench clean | 5% |
| Final written exam | 40% |
| Total | 100% |

A. Reference:

1. The Science and Art of Dental Ceramic, Volume II, Bridge design and Laboratory procedures In Dental ceramics. John W. Mclean, Quintessence Books
2. Dental laboratory Technology, Fixed prosthodontics, Volume 1, Medical Service, Air force, Washington DC 20330-5000.
- 3- Fixed Restorative Techniques, UNC

B. Periodicals:

1. "Journal of Prosthetic Dentistry"
2. "Quintessence of Dental Technology"
3. Journal of Dental Technology
4. Practical Periodontics & Aesthetic Dentistry