

SYLLABUS

COURSE: DENF 4901 Advanced Prosthodontics
SEMESTER: Fall
CREDIT HOURS: 1.0

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GOAL

This course is a continuum of the ongoing Prosthodontic series of courses, extending from the Pre-clinical through the clinical experience. The course is organized to provide an overview of Occlusion, Fixed Prosthodontics, Removable Prosthodontics, and Implant restorations. Each lecture will be structured to provide a review of the basic fundamentals of the lecture topic, a discussion of the application of these fundamentals to patient treatment, and an update on the latest technological advances/treatment modalities. An important component of the course will be the presentation of several case-based studies and clinic scenarios that involve diagnosis and treatment planning, by the student, of complex prosthodontic cases. These cases have been developed to challenge the student to investigate, analyze, justify, and objectively evaluate the outcomes of the proposed treatment plans. Successful completion of this course will help to expand the student's knowledge of a wide range of available prosthodontic treatment.

OBJECTIVES

I. RESTORATION OF ENDODONTICALLY TREATED TEETH

1. Explain the restorative requirements of endodontically treated teeth and the indications for placing a casting or crown on an endodontically treated tooth.
2. Describe the importance of retention and resistance for in tooth preparation and understand the indications of a core restoration to help achieve these two requirements.
3. Describe the various types of prefabricated posts available and the advantages and disadvantages of these different post systems.
4. Describe the indications for a cast post and core and different methods of fabrication of cast post and cores.

II. THE COMBINATION SYNDROME

1. Define this syndrome (also known as Kelly's Syndrome or anterior hyperfunction syndrome).
2. Identify the clinical characteristics of the combination syndrome with attention to:
 - a. bone loss in the anterior maxilla
 - b. overgrowth of tuberosities
 - c. papillary hyperplasia of palate
 - d. extrusion of lower anterior teeth
 - e. loss of bone and ridge height beneath the mandibular RPD
3. Describe the clinical procedure required for the treatment of patient's with combination syndrome
4. Discuss the complications of treating patients with combination syndrome

III. PERIODONTIC/PROSTHODONTIC TREATMENT

1. Describe the biological width and discuss preprosthetic treatments used to establish the biological width.
 - a. crown lengthening
 - b. orthodontic extrusion
2. Describe several clinical scenarios in which esthetic gingival contouring may be a treatment of choice.
3. Describe the prosthetic considerations and laboratory steps required for diagnosis and treatment planning prior to gingival contouring.
4. Describe several clinical scenarios in which bone augmentation/grafting may be needed prior to prosthetic reconstruction.
5. Describe the prosthetic considerations and laboratory steps required for diagnosis and treatment planning prior to bone augmentation/grafting.

6. Describe the prosthetic considerations and techniques involved in periodontal splinting of teeth.

IV. REVIEW OF OCCLUSION AND TREATMENT OF TMD PATIENTS

1. Review the following subtopics of occlusion.
 - a. mandibular movements
 - b. static occlusal contacts
 - c. anatomic variants and their effects on tooth morphology
 - d. effect of Bennett movement
 - e. centric relation
2. Understand the function of an anterior deprogrammer.
3. Understand the functions of an occlusal splint.
4. Compare and contrast the etiology, symptoms and treatment of internal derangements of TMJ vs. occlusion-related TMD.

IV. RESTORATION OF THE PARTIALLY EDENTULOUS PATIENT: POSTERIOR SEGMENTS

1. Review the Kennedy classification of partially edentulous ridges.
2. Understand why an altered cast technique is used.
3. Review the basic principles of FPD designs.
 - a. biomechanics
 - b. treatment designs for misaligned abutments
 - c. preparation designs
 - d. pontic designs
 - e. connector designs
4. Review the fundamental principles that must be considered when diagnosing and treatment planning posterior FPDs.
5. Review the basic principles of diagnosing and treatment planning implants in the posterior quadrants.
 - a. anatomical limitations
 - b. effect of bone quality
 - c. linear vs. non-linear arrangement of implants
 - d. occlusion

V. RESTORATION OF THE EDENTULOUS PATIENT

1. Describe the anatomical factors that influence the borders and limitations of a complete denture.
2. Understand the principles and influence on denture occlusion of
 - a. incisal guidance
 - b. angle of the articular eminence
 - c. posterior cusp height
 - d. compensating curve

- e. occlusal plane
 - f. vertical dimension of occlusion
 - g. vertical dimension of rest
 - h. interocclusal distance
3. Understand the principles of occlusal equilibration of denture occlusion.
 4. Understand the principles and concepts associated with the fabrication of overdentures and implant assisted overdentures
 5. Understand the techniques and concepts associated with the fabrication of immediate dentures.

VI. RESTORATION OF THE ESTHETIC ZONE

1. Describe the principles and uses of
 - a. resin-bonded bridges
 - b. cantilever bridges
 - c. metal-ceramic bridges
2. Describe the preparation used for metal-ceramic crowns.
3. Review the techniques of fabricating a metal-ceramic crown.
4. Describe fundamental considerations involved in diagnosing and treatment planning a single-tooth implant in the anterior maxilla.
5. Describe fundamental considerations involved in diagnosing and treatment planning a fixed-hybrid implant or an implant supported FPD.

VII. PRECISION ATTACHMENTS

1. Define the following terms:
 - 1.1 precision attachment
 - 1.2 semi-precision attachment
 - 1.3 intra coronal attachment
 - 1.4 extra coronal attachment
2. Compare and contrast resilient and non-resilient attachments.
3. Describe the construction of an ERA attachment.
4. Describe the clinical application of:
 - 4.1 an O-ring attachment
 - 4.2 a plunger attachment
5. Explain the significance of a space requirement for the placement of attachments.
6. Give a typical case description suitable for the Andrews Bridge attachment.
7. Compare and contrast three extra coronal clasp variations designed to be esthetic alternatives to attachments.

8. Identify the advantages and disadvantages of attachments.
9. Describe the milling procedure as applied to RPD abutment crowns and give advantages.
10. State the life expectancy of an attachment.
11. Give examples of cases suitable for the application of precision and semiprecision attachments.

RESOURCES

I. Media Resources

A. Printed Media

1. Lecture material: handouts, when available
2. Recommended Texts

Schillingburg, Hobo & Whitsett
Fundamentals of Fixed Prosthodontics, 3rd ed.
Quintessence Publishing Co., Inc., Illinois, 1997

Stewart, Rudd
Stewart's Clinical Removable Partial Prosthodontics, 3rd ed.
Quintessence Publishing Co., Inc., Illinois, 2003

McGivney and Castleberry
McCracken's Removable Partial Prosthodontics, 10th ed.
C.V. Mosby, St. Louis, 2000

Rahn and Hartwell
Textbook of Complete Dentures, 5th ed.
Lea Febiger, 1993

Neff
TMJ Occlusion and Function, 8th ed.,
Georgetown University School of Dentistry
Washington, DC, 1999

Misch
Contemporary Implant Dentistry, 2nd ed.
C.V. Mosby Co., St. Louis, 1999

II. Human Resources

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STUDY PLAN AND REQUIREMENTS

To receive the maximum benefit from this course, the student is advised to attend all lecture sessions. A large emphasis of this course is placed on the clinical applications of the principles of Prosthodontics, which will be presented in a variety of formats including case presentations. In addition, much of the presented material has been integrated from a number of resources, thus, the information given in lecture is not available in a single source.

A portion of this course is devoted to reviewing the fundamental concepts that were presented in the previous Prosthodontic courses. Much of the review material can be found in your lecture notes from DEPF 2907 Prosthodontics I, DEPS 2908 Prosthodontics II, and DENF 3901 Clinical Prosthodontics courses, as well as the recommended textbooks listed in this syllabus. Reviewing these notes will assist in understanding the lectures as they are presented, as well as helping to prepare for the National Board Dental Examination, Part II.

DENF 4901 ADVANCED PROSTHODONTICS 2003 Fall Semester Schedule

Lectures: Tuesday, 11-11:50 am, except September 16

DATE	SUBJECT	PRESENTER
Aug 12	Course Introduction Restoration of Endodontically Treated Teeth	Ridall
Aug 19	Management of the Combination Syndrome	Ridall
Aug 26	Review of Occlusal Concepts and Treatment of TMD patients	Huff
Sep 2	Periodontic/Prosthodontic Treatment	Ridall
Sep 9	Restoration of posterior partial edentulous patients I	Belles
Sep 16	Restoration of posterior partial edentulous patients II	Belles
10-11:50 am	Esthetic zone restorations	Ridall
Sep 23	<i>No class</i>	
Sep 30	Esthetic zone restorations II	Ridall
Oct 7	Mid-Term Examination	Ridall
Oct 14	Restoration of complete edentulous patients I	Locht
Oct 21	Restoration of complete edentulous patients II	Gonzalez
Oct 28	Precision Attachments I	Adkisson
Nov 4	Recent advances in technology/materials	Ridall
Nov 11	Review Session I for NBDE II	Ridall
Nov 18	Review Session II NBDE II <i>Course Evaluation</i>	Ridall
Mon, Dec 9 8-9:50 am	FINAL EXAMINATION	Ridall

EVALUATION METHODS

The final grade for the course will be comprised of the following:

Mid-Term Examination	40%
Final Examination	60%

The Mid-term Examination will emphasize material that has been covered in the previous class sessions; however, some questions from the general domain of prosthodontics and clinical experience may also be included in the exam. The Final Examination will be comprehensive and will cover material presented in all class sessions. In addition, some case-based questions will be included in the exam. The examination format may include multiple choice, true/false, short answer or essay.

Attendance for this course is mandatory. A sign-in sheet will be passed around during each lecture session. As a matter of courtesy to the speaker and to get maximum benefit from the lecture, you should make every reasonable effort to arrive to class before the speaker begins the lecture. Excused absences will be only those verified by the Office of Student Affairs.

As a courtesy to your colleagues and to the speaker, unprofessional behavior outlined by the *Student Guide to Academic Studies* will not be tolerated. The first occurrence will result in a warning. The second occurrence will result in your being dismissed from the class session. Examples of unprofessional behavior include (but are not limited to):

- audible signals on pagers or cellular phones during class.
- talking on cellular phones during class.
- leaving class after the presenter has started and before the presenter has concluded.
- taking handout materials before class starts but not attending the class.
- making disrespectful comments to classmates or instructors
- carrying on conversations with classmates while the presenter is speaking