

DLT 215
ADVANCED PARTIAL DENTURES

COURSE DESCRIPTION:

Prerequisites: DLT 118

Corequisites: None

This course examines the biomechanics of removable partial denture design as well as fabrication and concepts, including gnathological principles as applied in the construction of restorations. Emphasis is on fabricating advanced cast metal restorations, including bite raisers, flat back facings, tube teeth, and concepts relating to precision partial construction, such as implants. Upon completion, students should be able to demonstrate an understanding of gnathological concepts and the fabrication of special types of removable restorations. Course Hours Per Week: Class, 1. Lab, 6. Semester Hours Credit, 3.

LEARNING OUTCOMES:

The student will:

- a.) Interpret dental prescriptions for special types of removable restorations.
- b.) Identify and locate anatomical landmarks of the oral cavity.
- c.) Define terms associated with special types of removable restorations.
- d.) Identify materials used in fabricating cast partial dentures.
- e.) Define terms associated with gnathological concepts.
- f.) Demonstrate an understanding of occlusion.
- g.) Form occlusal patterns using drop wax technique.
- h.) Demonstrate an understanding of cast partial denture design principles and fabrication procedures.
- i.) Fabricate maxillary and mandibular removable partial dentures utilizing flatback facings, tube teeth, and solid saddle retentions.
- j.) Fabricate a cast metal bite raiser.
- k.) Develop suitable removable partial denture designs according to the surveyed casts.
- l.) Seat finished restorations on their respective master casts.
- m.) Participate in a group project for the assessment of critical thinking skills.

OUTLINE OF INSTRUCTION:

- I. Review protocol for controlling cross-contamination in the dental laboratory.
 - A. References
 - 1. Infection control in the dental laboratory – RR Runnels
 - 2. NADL – Infection control program
- II. Cast partial dentures with anterior flatback facing and posterior tube teeth
 - A. Classroom lecture -- 2 hours
 - 1. Presentation

- a.) the dentures to the master cast
 - 2. Application
 - B. Laboratory demonstration--2 hours
 - 1. Fitting the facing and backing
 - 2. The anterior matrix
 - 3. The posterior matrix
 - 4. Fitting tube teeth
 - 5. The remelt technique
 - 6. Articulation and framework adjustment
 - 7. Laboratory remount
 - 8. Fitting the dentures to the master casts
 - C. References
 - 1. Dental Laboratory Technology, USAF, Vol. II, pages 216-219
 - 2. Handouts
- III. Bite raisers
- A. Classroom lecture--1 hour
 - 1. Presentation
 - a.) Definition of a bite-raiser
 - b.) Purpose
 - c.) Types of bite raisers
 - d.) Factors for successful bite raisers
 - e.) Gnathological concepts
 - f.) Procedures for fabrication
 - 2. Application
 - B. Laboratory demonstration--2 hours
 - 1. Articulation
 - 2. Plaster matrices
 - 3. Survey and design
 - 4. Block-out for duplication
 - 5. Articulate refractory cast
 - 6. Forming the wax occlusals (drop/wax technique)
 - 7. Remount casting
 - 8. Selective grinding
 - 9. Final finishing and polishing
 - C. References
 - 1. Dental Laboratory Technology, USAF, Volume I, pages 108-125
 - 2. Handouts
- IV. Effective surveying and designing
- A. Classroom lecture-demonstration--2 hours
 - 1. Presentation
 - a.) Analyzing for effect
 - b.) Alternatives for design
 - c.) Bio-mechanics of design
 - 2. Application
 - B. Surveying and designing seminar
 - C. Group Project

D. Reference

1. Dental Laboratory Technology, USAF, Volumes I and II
2. Prosthodontic Techniques, UNC
3. Handouts
4. Personal notes
5. Supplementary texts

REQUIRED TEXTBOOKS AND MATERIALS:

Sowter, Removable Prosthodontic Techniques, University of North Carolina.

Ticonium Technique Manual, Ticonium Company, Albany, New York.

Dental Laboratory Technology, AFM 162-6, Volumes I, II, and III, Department of the Air Force, Washington, DC, 1991.

Handout--"Grinding and Adaptation Technic for Steele's Interchangeable Teeth," Columbus Dental, Columbus, Ohio.

Handout--"Bite Raisers".

Runnels, Infection Control in the Dental Laboratory - Handout

SUGGESTED REFERENCES, PERIODICALS AND VISUAL AIDS:

Journal of Dental Technology

Practical Periodontics & Aesthetic Dentistry

The Journal of Prosthetic Dentistry

An Atlas of Removable Partial Denture Design, 1988

Attachments for Prosthetic Dentistry, 1994

Attachments in partial Dentures, 1984

The Distal Extension Case, 1981

Full View Additive Wax Part I, II, III, 1975

McCracken's Removable Partial Prosthodontics, 1981

Modern Gnathological Concepts, 1983

Occlusion: Principles and Concepts, 1985

Weinberg, Atlas of Removable Partial Denture Prosthodontics, C. V. Mosby: 1969.

Dykema, Modern Practice in Removable Partial Prosthodontics, W. B. Saunders: 1969.

Schweitzer, Oral Rehabilitation Problem Cases, C. V. Mosby: 1964.

STATEMENT FOR STUDENTS WITH DISABILITIES:

Students who require academic accommodations due to any physical, psychological, or learning disability are encouraged to request assistance from a disability services counselor within the first two weeks of class. Likewise, students who potentially require emergency medical attention due to any chronic health condition are encouraged to disclose this information to a disability services counselor within the first two weeks of class. Counselors can be contacted by calling 919-536-7207, ext. 1413 or by visiting the Student Development Office in the Phail Wynn Jr. Student Services Center, room 1209.