

## **SYLLABUS**

COURSE: CLIN 3005 Prosthodontic Clinic  
SEMESTERS: Fall/Spring/Summer  
CREDIT HOUR: 6.0

REVISED: 2009  
REPRINTED: 2009

COURSE DIRECTOR: Donald Belles, D.D.S., M.S.

## GOAL

This course introduces the third year student to the clinical aspects of delivering patient care in the specialty of prosthodontics. It is designed to provide the student the opportunity to use critical thinking skills by utilizing information learned in basic sciences, clinical disciplines, and pre-clinical laboratories to treat patients in a clinical setting. The student is expected to develop the necessary skills for gathering diagnostic information, developing a sequential treatment plan, and performing basic prosthodontic procedures using sound clinical judgment.

After successful completion of this course, the student should have a sound basic foundational knowledge and experience of prosthodontics that will enable him/her to manage prosthodontic patients with minimal supervision. The foundation of clinical knowledge and experience acquired in this course will help the student to develop a strong desire to become a life-long learner in this field.

## CRITERIA TO ACHIEVE COMPETENCIES

*The following information can be found in the Prosthodontic Clinical Manual and the Competency Assessment and Evaluation Criteria forms.*

- I. Fixed Prosthodontics
  - A. Impressions (Diagnostic)
  - B. Casts
  - C. Face bow Record
  - D. Jaw Relation Records/Diagnostic Mounting
  - E. Occlusal Analysis
  - F. Survey Crown
  - G. Preparations (Complete and Partial Veneers)
  - H. Provisional Restorations (Posterior)
  - I. Provisional Restorations (Anterior)
  - J. Custom Trays (Fixed Restorations)
  - K. Final Impression
  - L. Master Cast (Fixed)
  - M. Cementation
  - N. Work Authorization
  - O. Oral Health Maintenance
- II. Removable Prosthodontics
  - A. Extra-oral, Radiographic and Intra-oral Exam (Complete Dentures)
  - B. Diagnostic Impressions
  - C. Custom Tray (Removable)
  - D. Border Molded Final Impression (Complete Denture)
  - E. Contouring of Occlusion Rims and Jaw Relation Records
  - F. Esthetic Try-In and Jaw Relation Verification
  - G. Final Tooth Arrangement and Wax Contours
  - H. Insertion and Clinical Remount (Complete Dentures)
  - I. Surveyed Design Cast (RPD)
  - J. Master Cast (RPD)
  - K. Work Authorization
  - L. Oral Health Maintenance

## RESOURCES

### I. Human Resources

#### A. Faculty (Projected)

<b><i>CLIN 3005</i></b>		<b><i>Room</i></b>	<b><i>Extension</i></b>
Donald Belles, DDS, MS	<u>Course Director</u>	441	4335
Rodney Beetar, DDS, MS		409	4343
Gene Stevenson, DDS, MS		413	4348
Mohsin Ali, DDS		435	4065
Maria Gonzalez, DDS, MS		435	4138
Sergio Ortegon, DDS, MS		421	4139
Raymond Koeppen, DDS, MS		423	4274
Chansoep Park, DDS, MS		440	4267

#### B. Support Staff

Mary Baines, Senior Executive Assistant  
Room 422, Extension 4136

Vanissa Davis, Sr. Support Assistant  
Room 422, Extension 4137

#### C. Laboratory Support Staff

##### 1. Technicians

Mr. Tony Nguyen Room 144  
Ms. Katrin Andreyeva  
Mr. Dario Rodriguez  
Mr. James Stewart  
Mr. Mario Mendez

##### 2. Tooth Room-123

Ms. Everill Marcano, Laboratory Assistant  
Extension 4067

I. Foundational Knowledge

DENF	1501	General Histology
DENF	1502	Gross Anatomy
DENF	1504	Neurosciences
DENU	1707	Integrated Biologic Sciences I
DENS	1521	Biochemistry
DENF	1541	Physiology I
DENS	1542	Physiology II
DENF	1601	Dental Anatomy
DENF	1621	Ethics in Dentistry
DENS	1671	Biomaterials I
DENF	2561	Dental Pharmacology
DENF	2562	Local Anesthesia
DENF	2671	Indirect Restorative Materials
DENF	2704	Introduction to Clinic
DENF	2701	General Pathology
DENS	2723	Implantology I
DENS	2801	OMFS I
DENS	2803	Internal Medicine
DENS	2936	Behavioral Context-Dental Patient Management

III. Foundational Skills

DEPF	1602	Dental Anatomy Lab I
DEPS	1603	Dental Anatomy Lab II
DEPS	1614	Operative Dentistry I
DENF	1651	Foundational Skills for Clinic
DEPS	1901	Basic Occlusal Concepts
DENF	2614	Operative Dentistry II
DENF	2703	Oral and Maxillofacial Radiology I
DENF	2704	Introduction to Clinic
DENF	2721	Periodontics I
DENS	2722	Periodontics II
DEPF	2907	Complete Dentures
DEPF	2908	Fixed Partial Dentures
DENU	2909	Implantology II: Prosthodontic Concepts
DEPF	2910	Fixed Prosthodontics-Single Unit
DEPS	2911	Removable Partial Dentures

## ACTION PLAN AND REQUIREMENTS

Our goal is to provide efficient, comprehensive dental care with a commitment to excellence. This is best accomplished when:

1. Students are academically prepared for each patient appointment.
2. Students maintain a clean, properly equipped operatories at all times.
3. Students gather thorough diagnostic information efficiently.
4. Patients have an approved treatment plan before initiating prosthodontic treatment. Any patient transferred from another student must be re-evaluated for an appropriate diagnosis and treatment plan even if work is already in progress.
5. Students have diagnostic information readily available
  - a. Digital image available in the EPR.
  - b. Neatly mounted diagnostic casts on a clean articulator at the correct settings for the patient.
  - c. Diagnostic wax-ups and other aids for tooth preparation. Students are able to present their patient, including relevant information and the procedure to be done, to the instructor. Students must receive a start in the EPR before initiating treatment. Vital signs are recorded at each patient visit. Treatment is carried out in the order established in the treatment plan (Modification must be justified).
6. Students work with the same prosthodontic instructor to complete the treatment plan or at least start and finish a phase in the treatment plan with the same instructor(s).
7. Laboratory work is shown to the instructor at least **24 hours** prior to the patient appointment.
8. Students are organized and use their time wisely.
9. Students exhibit professionalism in treating their patients.
10. **Timeliness of Care**  
Complete denture patients should be seen as early as possible in the semester and made ready for treatment so the denture fabrication may be taking place while the diagnosis and treatment plans and pre-prosthetic care of dentate patients is being accomplished.

### **Suggested appropriate time lines of treatment once initiated:**

Complete Dentures	5 Weeks (total treatment time)
RPDs	3 Weeks (after final impression)
Fixed Units after the preparation is completed:	
No more than 1 week before final impression appointment	
Lab work submitted 3 days after final impression	
In lab 10 working days (does not include shipping and receiving dates)	
Try-in or insertion within 1 week after returned from lab	

Typical clinical cases should be straight-forward and relatively uncomplicated. The clinical instructors will guide the student through the various steps involved in providing patient care. As the student develops

clinical experience, knowledge, and competency, he/she will be able to treat patients with less supervision. With permission from the clinical instructor, the student may be permitted to perform more complex treatments.

### **Faculty/Student Assignments**

Most prosthodontic procedures require multiple, sequenced appointments. Management of these appointments and the laboratory preparatory work necessary between is as stressful as performing the clinical treatment. Your prosthodontic group leader is charged to help you learn to manage the treatment. Therefore, you should confer with him/her prior to each appointment.

Each Third Year student is assigned to one of eight (8) Prosthodontic Groups (Red A & B, Green A & B, Yellow A & B, and Blue A & B). Your prosthodontic patients must be appointed to coincide with the sessions your group is assigned to the clinic. Each patient's next appointment should be scheduled before their departure from their current clinical appointment. This is the best mechanism to ensure a prompt progression of your patient care.

## ESSENTIAL EXPERIENCES

**Diagnostic Procedures** as outlined in the **Prosthodontic Standards of Care** are required prior to initiating any definitive prosthodontic treatment.

### **Fixed Prosthodontics** (recommended)

- 1 Complete Veneer Gold Crown
- 1 Metal-Ceramic Crown
- 2 Additional Single Unit Castings
- 1 Cast Post and Core
- 1 Fixed Partial Denture (Gold or Metal-Ceramic)
- All necessary foundations (build-ups)

### **Removable Prosthodontics** (recommended)

One patient requiring complete maxillary and mandibular dentures and one patient requiring a complete denture opposing a removable partial denture (a combination case) is ideal.

### **Emergency Patient Care: You are responsible for all of your patient's EMERGENCIES!**

All dental practices are beset by emergency dental patients; it is important for you to learn to cope with these "intrusions" during your hopefully busy private practice schedule. This is meant to introduce you to this difficult management problem in a controlled manner. Problems arising from among your own active patients (a loose, lost, or broken provisional to outright pain or discomfort) - these patients' problems are yours to resolve. You must find the time to manage them yourself. The patient will relate these problems directly to you and you must manage them expeditiously. This is important so you can maintain the patient's confidence, continuity of care, and a positive risk management practice.

Prosthodontic Essential Procedures are defined as follows:

1. Foundations
  - a. Extensive restorations (4 or more surfaces) of tooth structure with amalgam for a subsequent crown preparation. Foundations should have been placed within the last year at UTDB.
  - b. Post and core, either pre-formed (Para-post) with amalgam build-up, custom cast post and core, or amalcore. These include all clinical and laboratory procedures.
2. Restorative Treatment
  - a. Fixed Prosthodontic: Diagnostic Work-up, preparation of a single crown or fixed partial denture abutment, an impression of the prepared tooth, appropriate provisional coverage, (necessary cast and die work, Laboratory Work Authorization), fitting, occlusal adjustment, polish, cementation of final restoration constitutes a restorative treatment. Fixed partial dentures and metal-ceramic restorations will be fabricated by the dental laboratory.
  - b. Removable Prosthodontics
    - (1) Essential Experiences:
      - (a) Complete denture for either arch

- (b) RPD with cast framework for either arch
- (c) Overdenture
- (d) Immediate complete denture either arch (requires special approval in Junior year)

(2) Recommended Experiences:

- (a) Occlusal splint fabricated by student
- (b) Provisional RPD
- (c) Reline of a prosthesis including remount and occlusal correction.
- (d) Remount of complete dentures (occlusal correction) fabricated by someone else that requires making remount casts and face bow record.
- (e) Single tooth implant/implant retained overdenture

(3) Optional Experiences:

- (a) Compilation of pre-extraction records
- (b) Broken denture tooth repair
- (c) Denture base repair
- (d) RPD repair, clasp or base
- (e) Sports mouth guard (limit one per student)

3. Laboratory procedures you are responsible for:

- a. Pouring all impressions, accomplishing all steps for removable dies including trimming margins, die spacer application and mounting procedures.
- b. Diagnostic preparation and/or wax-up for esthetics or occlusal plane determination, including duplication of wax-up and pouring a stone cast and a matrix for provisional fabrication is essential for all fixed patients.
- c. Fabrication of all custom trays.
- d. Diagnostic wax-up for submission to lab.
- e. Laboratory work authorization.
- f. All necessary removable complete denture tooth set-ups or removable partial denture tooth set-ups including RPD cast survey, tripod, and design for survey crowns.

### Laboratory Procedures

Patient needs for all procedures may not be available for all students to meet these minimum experiences by the end of the junior year. If this seems to be a problem, you should work closely with your prosthodontic clinical instructor and Practice Leader to get the best mix of experiences. You are required to accomplish all steps in Removable Prosthodontic Procedures **except RPD Frame works and acrylic resin processing. Metal-Ceramic Restorations, Fixed Partial Dentures, Removable Partial Denture cast metal frame works and the processing of acrylic resin** procedures will be accomplished by the dental laboratory on the with proper submission materials and instructions.

### Laboratory Submissions

All removable laboratory work is submitted to the Out Patient Dental Laboratory (Tooth Room, DB-126) with the exception of RPD framework fabrication, which is submitted to Room 422. All fixed laboratory work is submitted to Room 422, even if you are going to perform the laboratory work yourself. A properly completed Dental Laboratory Work Authorization form, signed by your Prosthodontic Instructor is necessary and if graded exam steps are involved, you and your instructor must submit the appropriate

competency evaluation document.

1. Preparation – (**exam step**, evaluated in Laboratory)
2. Final Impression(s) – (**exam step**, evaluated in Laboratory)
3. Master/Working Cast (removable dies) mounted cast analysis information (angle of eminence, Bennett angle or side shift), dies trimmed, margin identified and protected with die hardener, die spacer applied (**exam step**, evaluated in Laboratory)
4. Work Authorization – (**exam step**, evaluated in Laboratory)
  - a. Instruction for metal cut back
  - b. Contours
  - c. Proximal contacts
  - d. Occlusal contacts
  - f. Also submitted:
    - (1) Diagnostic Mounting
    - (2) Survey, tripoded and designed cast with RPD Work Sheet design
    - (3) Second pour solid cast for crowns and fixed partial dentures
    - (4) Go-by cast or Diagnostic wax-up

### **Case Completion**

After clinical procedures have been completed, disposition of your patient's casts should be as follows:

1. All fixed casts should be turned in to the Out Patient Dental Laboratory.
  - a. Pindexed die cast
  - b. Opposing cast
  - c. Final impressions
2. You should maintain all complete denture remount casts until graduation. This will facilitate any post-operative treatment at a later date.

**Note:** Your clinic instructor may determine more experiences are necessary. Merely completing these minimal experiences does not assure successful completion of the Third Year Prosthodontic clinical course. The bottom line is that your **faculty** must feel you have had positive patient treatment performances.

## EVALUATION METHODS

### CLIN 3005 Prosthodontic Clinic Grade

Exam steps/Competencies	50%
Productivity	30%
Daily/Professionalism	20%
<b>Total</b>	<b>100%</b>

#### I. **CLINIC EXAM STEPS AND COMPETENCIES** **50% of grade**

Competency for progression to the senior year clinic will be determined by the Clinical Exams, the RPD Exam, Crown Preparation Bench Examination, a Crown Competency Test (optional for third year students), a positive faculty evaluation.

Each of the graded steps must be accomplished without help (physical) and evaluated at a “3 criteria” or better, to qualify as an exam grade. Exam steps can be accomplished on any fixed patient in any sequence. Your instructor will identify the exam step on a competency document. When multiple grades are recorded for the same step, the highest grade will be used for the final grading. If any exam step is incomplete by the end of the spring semester, the student will receive a maximum score of 3 for each exam step accomplished during the summer session. The graded examination steps are (1) Diagnostic Work-up, (2) Preparation, (3) Provisional, (4) Impression, (5) Master Cast, (6) Work Authorization, (7) Try-in, and (8) Cementation. Please refer to the Competency Assessment and Evaluation Criteria forms at the end of this syllabus. Students must complete all exam steps (except for the diagnostic work-up) **at least two (2) times as a prerequisite**, before exam step credit will be awarded.

#### **Fixed Examination Steps** **40% of grade**

24 points =	<b>C</b>	(75%)
32 points =	<b>B</b>	(85%)
40 points =	<b>A</b>	(100%)

#### *Grading Example*

A student with a total of 32 points for their exams steps would receive a score of 34 for this portion of their grade (32 would equal 85%, 85% of 40 would equal 34).

#### **Removable Partial Denture Design Examination** **Pass/Fail**

A maxillary or mandibular design cast will be provided in the by the Prosthodontic Group Leader for each student to design, write a work authorization, and defend their proposed treatment. The exam has a one hour time limit and is to be taken without the aid of reference materials. The exam must be retaken until a passing grade is accomplished (must pass before the end of the semester).

#### **Fixed Preparation Bench Examination** **5% of grade**

The objective of this examination is to prepare a fixed partial denture on a manikin head. The examination has a two hour time limit and will not require a provisional restoration. Students with a failing grade will be required to retake the examination (highest grade attainable is 70).



III. **CLINICAL JUDGEMENT/PROFESSIONALISM AND DAILY EVALUATION**      **20% of grade**

Based on Knowledge, Preparedness, Timeliness, Cleanliness--Clinical and Laboratory, Record Documentation, Quality Assurance, Patient Rapport, Peer Rapport, Instructor Rapport, and Subjective Faculty Evaluation.

IV. **COURSE COMPLETION**

- A.      End of Spring Semester: May 2010
- B.      Progression to the fourth year level is based on successful completion of all the clinical exam steps, the RPD, Fixed Competencies, and your Prosthodontic Faculty Recommendation. Course failure can result from a deficiency in any of the previous.

## COMPETENCY CROWN PROCEDURE

The purpose of the evaluation crown is to allow you to assess your performance and to work independently, while allowing the faculty to evaluate your clinical competence in Fixed Prosthodontics. The competency crown is recommended during the Third Year, but is a Fourth Year student requirement (2 crown competencies). A satisfactorily passed evaluation crown as a Third Year can fulfill your Fourth Year requirement.

The procedures followed for this examination should not be any different from those involved in the restoration of any complete crown. The exception is that you cannot receive any help from your instructor. If you are unsure about anything and have a question, ask. It would be better to lose a point or two than proceed and cause iatrogenic damage to the patient's tooth, resulting in possible failure.

Prior to initiating an evaluation procedure, you should be fully prepared to describe the rationale for placement of a crown, how the treatment relates to the overall plan of care, the current periodontal, pulpal, and occlusal status of the tooth to be crowned, the type and design of the proposed prosthesis, and any special problems and considerations of which the attending faculty should be aware.

1. **The following are requirements for challenging the evaluation crown procedure:**
  - A. You must have satisfactorily completed all Junior examination steps prior to initiating the evaluation crown.
  - B. The competency crown should be completed in a maximum of four (4) appointments.
  - C. You have 15 days (clinical) to complete this exam. If you go past this deadline, for any reason (including the patient's ability to return) you will receive a 10-point penalty. The examination must be completed in the semester in which it was started (Fall/Spring/Summer).
  - D. Any tooth treatment planned for a complete crown is acceptable as long as there is one (1) proximal contact and it is in occlusion with an opposing tooth (opposing RPD or CDs are not acceptable). This includes a crown that requires a remake.
  - E. If a FPD is selected for an evaluation, both abutment teeth will be evaluated.
2. **Clinical/Laboratory Requirements for the Competency Crown: You are required to complete the following procedures.**
  - A. Gold Crown: You must complete all laboratory procedures for the cast complete gold crown-casting may be done by the laboratory.
  - B. Metal-ceramic crown: You must pour and articulate a second working cast, and complete a full contour waxing of the planned crown PRIOR to submitting the original master cast to the laboratory for construction of the prosthesis. You will be responsible for any prosthesis you accept from the laboratory. The laboratory will be responsible for glazing your metal-ceramic crown, but you are required to polish all metal surfaces prior to final cementation.
3. **Evaluation**
  - A. You must obtain the evaluation form with given grading criteria prior to initiating the competency crown.
  - B. You can have steps evaluated by your Prosthodontic Group Leader(s), the Director of Third Year Prosthodontic Clinic, or the Department Chairman. Two graders are recommended for each examination step.
  - C. Evaluation steps: Preparation, Impression, Master Casts, and Work Authorization will be graded in the laboratory similar to a non-competency crown. Your competency crown grading form must be submitted in addition to all the required paperwork.
  - D. All other evaluation steps will be evaluated in the clinical environment.

- E. Self evaluation is a critical part of the examination process. **Your evaluation of each step is required; otherwise 2 points will be subtracted from each section lacking.**
  - F. Failure of any evaluation procedure will require that you clinically complete that crown prior to the initiation of a subsequent evaluation procedure. Failure of 2 evaluation procedures, for any reason, will require that the Department Faculty provide you remediation prior to the initiation of a subsequent evaluation procedure. This remediation will be prescribed by the Third Year Clinical Director in consultation with your Clinical Group Leader.
  - G. For any fixed prosthodontic procedure, the following outcomes will result in a failure:
    - 1. Failure to detect remaining caries on a prepared tooth.
    - 2. A mechanical exposure of the pulp.
    - 3. Damage to the adjacent tooth or teeth, which would necessitate a significant change in contour of the adjacent tooth or teeth.
    - 4. Failure to extend beyond existing foundation, caries, restorative material, or abrasion areas, by a minimum of 1.0 mm onto sound tooth structure.
    - 5. Irreversible damage to the periodontium during tooth preparation, retraction cord placement, impression procedures, or delivery of an inappropriate provisional restoration.
    - 6. Failure to detect an open margin on a restoration prior to permanent cementation.
    - 7. Failure to detect an open proximal contact prior to permanent cementation.
    - 8. Failure to detect occlusal discrepancies (hyper-, infra-occlusion, or non-functional contacts) prior to permanent cementation.
    - 9. Failure to properly diagnose the need for periodontal crown extension surgery or endodontic therapy prior to initiation of tooth preparation.
    - 10. "Excessive preparation of the tooth", necessitating root canal therapy, periodontal intervention, or extraction.
    - 11. Failure to completely remove temporary or permanent luting agents after cementation.
    - 12. **Any procedure that requires the intervention of the supervising faculty.**
4. **At the completion of the examination process a copy of the Evaluation Form must be given to the Third Year Prosthodontic Clinic Director.**

### THIRD YEAR STUDENT EVALUATION WORKSHEET 2009

Student: \_\_\_\_\_

Practice Group: \_\_\_\_\_

<b>Fixed Units Cemented</b> (Describe)	<b>Removable Units Inserted</b> (Describe)
<b>Total Units Fixed Inserted</b>	<b>Total Units Removable Inserted</b>

<b>Other Units</b> (Post-cores, Trans RPDs, etc., describe)	<b>Prostheses Currently in Laboratory or Awaiting Insertion</b> (Describe)
<b>Total Misc. Units</b>	<b>Total # Units Fixed/Removable to Insert</b>

#### Student Clinic Evaluation

Clinical Knowledge	1	2	3	4	5	6	7	8	9	10
Preparedness	1	2	3	4	5	6	7	8	9	10
Time Management	1	2	3	4	5	6	7	8	9	10
Clinic Cleanliness	1	2	3	4	5	6	7	8	9	10
EPR (Document)	1	2	3	4	5	6	7	8	9	10
Quality Assurance	1	2	3	4	5	6	7	8	9	10
Patient Rapport	1	2	3	4	5	6	7	8	9	10
Peer Rapport	1	2	3	4	5	6	7	8	9	10
Instructor Rapport	1	2	3	4	5	6	7	8	9	10
Overall Evaluation	1	2	3	4	5	6	7	8	9	10

*(Scale based upon 10 = 100%)*

**Please justify comments below a score of 7 in the space provided on page 2.**

