DEN6415C Preclinical Fixed Prosthodontics II
Spring 2021

Course Description:
A laboratory and lecture course covering topics related to patient treatment with fixed ceramometal restorations.

I. General Information

Course Director:
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Course Credits: 2
Semester: Spring

Assistant Course Director:
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II. Course Goals

The educational goal of this course is to promote mastery of the knowledge and skills necessary to perform fixed prosthodontic procedures on your future patients. The clinical practice of fixed prosthodontics requires the dentist to apply fundamentals that meet the biological, mechanical, and esthetic requirements of each restorative situation. This course will provide the basic information necessary to diagnose, plan and perform fixed prosthodontic restorative procedures. Upon successful completion of this course, you should be able to prepare teeth for a full gold FPD, a porcelain-fused-to-metal FPD, an all ceramic FPD and make a provisional bridge restoration for each one of these preparations. The basic principles on Resin Bonded Retainer (RBR) preparation will be provided as well as post and core concepts and procedures. In addition, you will be able to fabricate a custom tray for your final impression and to identify, and trim your own die. The concepts and principles of tooth preparation and dental laboratory procedures will be applied to dentoform teeth while the cognitive and psychomotor skills are being developed. Knowledge of dental laboratory procedures and development of dental laboratory skills will enable you to more efficiently perform clinical dentistry. You will become well prepared to delegate this work to a dental technician while maintaining your standard of quality once you enter practice.

III. Course Overview

This is a lecture and laboratory course. Students will use critical thinking in the self-assessment of psychomotor projects.
IV. Course Outline

A. Basic concepts of Fixed Prosthodontics: Gold Fixed Partial Denture (FMC) FPD
B. Basic concepts of Fixed Prosthodontics: Porcelain Fused to Metal (PFM) FPD
C. Basic concepts of Fixed Prosthodontics: All Ceramic FPD
D. Basic concepts of Provisional Fixed Partial Dentures
E. Custom Tray fabrication and Final Impressions
F. Model Work, Pindex and Margin Trimming
G. Current framework design and fabrication techniques
H. Basic concepts in Esthetics and Shade Selection
I. Dental Cements and Cementation Techniques
J. Restoration of Endodontically Treated Teeth
K. Prefabricated Fiber and Cast Post and Cores
L. Basic concepts of Fixed Prosthodontics: Resin Bonded Retainers (RBR)

V. Course Material

Required texts:


2. TEXT#2: Anusavice, K.J. Phillip's Science of Dental Materials, 12th ed. W. B. Saunders Co., 2012 (required text - this text is also required for DEN 6415C and 7717C)


4. Models provided by the Department:

A. MAXILLARY Dentoform FULLY DENTULOUS Duplicate Cast for Vacuform Provisional Matrix Fabrication
B. MANDIBULAR Dentoform FULLY DENTULOUS Duplicate Cast for Custom Tray and Vacuform Matrix Fabrication

5. Lecture Presentations can be found in Canvas

6. A collection of Procedural Videos can be found in Canvas

7. Glossary of Prosthodontic terms. Available free on line at:


Additional Resource:
Dental Lib Guide: http://guides.uflib.ufl.edu/dental

VI. Course Objectives

Didactic Objectives

This course will use a combination of lecture (direct instruction) and laboratory (psychomotor) exercises to accomplish the following learning objectives.

A. Basic concepts of Fixed Prosthodontics: Gold three-unit full metal restorations FMC FDP

1. Identify the preparation features that influence the character and the prognosis of full metal restorations.

2. Identify various indications and margin configurations available for use in full metal restorations.

3. Prepare anterior and posterior dentoform teeth for any full metal restoration to meet the criteria given in the self-instructional material. Be able to apply the fundamentals of tooth preparation to dentoform teeth.

B. Basic concepts of Fixed Prosthodontics: Metal-ceramic three-unit restorations PFM FDP

1. Identify the preparation features that influence the character and the prognosis PFM restorations.
2. Identify various indications and margin configurations available for use in PFM restorations.

3. Prepare anterior and posterior dentoform teeth for any PFM restoration to meet the criteria given in the self-instructional material. Be able to apply the fundamentals of tooth preparation to dentoform teeth.

C. **Basic concepts of Fixed Prosthodontics: All Ceramic FDP**
   1. Discuss biomechanical consideration of bridge construction.
   2. Review the relevant mechanical properties of ceramics for bridge construction.
   3. Discuss the use of ceramic in fabricating bridges.

D. **Custom Tray and Final Impression**
   1. Discuss materials and parameters of Custom tray Fabrication
   2. Describe Impression Materials and relevant indications
   3. Describe Impression Techniques and relevant indications

E. **Master cast, Pindex, Margin identification and Trimming**
   1. Discuss Basic Pindex Techniques
   2. Describe Margin Identification
   3. Describe Die Trimming techniques

F. **Dental Framework design and connecting techniques**
   1. Describe proper framework design
   2. Identify contemporary framework fabrication techniques
   3. Describe contemporary framework connecting techniques

G. **Esthetics and Shade Selection in Fixed prosthodontics**
   1. Identify color and dental shade principles
2. Describe shade selection armamentarium and techniques
3. Identify factors that can affect color selection

H. Dental Cements and Cementation Techniques
1. Present Conventional Cements
2. Discuss Properties and Indications
3. Describe manipulation and Cementation Techniques
4. Present Resin Cements
5. Discuss Properties and Indications
6. Describe manipulation and Cementation Techniques
7. Discuss available cements for Implant reconstructions
8. Exposure to different cementation methods and materials used in other US or European Dental Schools.

I. Restoration of Endodontically Treated Teeth
1. Basic principles of Restoring Endodontically Treated Teeth
2. Present available Materials for Post and Core Fabrication
3. Discuss the importance of the Ferrule effect
4. Describe Prefabricated Posts and Composite Resin Cores
5. Describe Cast Post and Cores

j. Resin Bonded Retainers (RBR)
1. Identify available materials used for RBRs
2. Discuss indications and design Characteristics of the RBRs
3. Demonstrate a conservative preparation
Preclinical Sim Lab Objectives

Module #1: Full metal FDP / Provisionals

- Familiarize yourself with the terminology described in the glossary of prosthodontic terms
- Identify lab fabrication techniques for metal FDP and provisionals
- Follow the instructions demonstration ergonomic patient, operator, and assistant positioning
- Associate with mental map of the procedure to be performed
- Identify possible issues with preparation and provisional fabrication
- Select a material for provision restoration that works best in your hands
- Practice and replicate techniques for full metal FDPs and provisional fabrication in simlab outside mannequin
- Perform provisional techniques automatically with proficiency on a mannequin
- Practice techniques for full metal FDPs and provisionals that align with the calibrated rubric
- Improve efficiency with full metal FDPs preparation and provisional fabrication under timed conditions
- Demonstrate techniques for full metal FDPs and provisionals on mannequin accurately and efficiently
- Understand how to fix a possible situation with the dental procedure that is not going well
- Perform gold restoration techniques automatically with proficiency on a mannequin

Module #2: Custom tray / Final impressions / Master cast / margin identification and trimming

- Familiarize yourself with the terminology described in the glossary of prosthodontic terms
- Identify materials and lab fabrication techniques for custom tray fabrication
- Identify possible issues with fabrication of custom trays
- Practice and replicate techniques for custom tray fabrication that align with the calibrated rubric
- Improve efficiency with custom tray fabrication under timed conditions
- Understand how to fix a possible situation with the dental procedure that is not going well
- Identify materials and impression techniques
- Identify quality and possible difficulties with impression making
- Practice and replicate techniques for impression making that align with the calibrated rubric
- Improve efficiency with final impression making under timed condition
- Identify materials and techniques for fabrication of the master cast
- Identify the preparation margin
- Practice in margin trimming and die preparation techniques that align with the calibrated rubric
Module #3: Provisional cementation / Fiber post and Cast post and core pattern fabrication

- Familiarize yourself with the terminology described in the glossary of prosthodontic terms
- Identify materials and lab fabrication techniques for fiber and cast post fabrication
- Identify possible issues with fiber post and cast post and core fabrication
- Practice and replicate techniques for post fabrication that align with the calibrated rubric
- Improve efficiency with post fabrication under timed conditions
- Understand how to fix a possible situation with the dental procedure that is not going well
- Identify temporary cementation materials and techniques
- Practice and replicate techniques for provisional cementation that align with the calibrated rubric
- Improve efficiency with provisional cementation under timed condition

Module #4: Resin Bonded FDP (single wing)

- Familiarize yourself with the terminology described in the glossary of prosthodontic terms
- Identify materials and lab fabrication techniques for single wing RBR prosthesis
- Identify possible issues with for single wing RBR prosthesis fabrication
- Practice and replicate techniques for single wing RBR prosthesis fabrication that align with the calibrated rubric
- Improve efficiency with single wing RBR prosthesis fabrication under timed conditions
- Understand how to fix a possible situation with the dental procedure that is not going well

VII. Course Competencies

This course teaches the following competencies in the "Competencies for the New Dental Graduate"

Domain I: Critical Thinking

1: Critical Thinking: Use critical thinking and problem-solving, including their use in the comprehensive care of patients, scientific inquiry and research methodology.

2: Evidence-Based Patient Care: Access, critically appraise, apply and communicate scientific and lay literature as it relates to providing evidence-based patient care.

Domain VI: Patient Care

A. Assessment, Diagnosis, and Treatment
12: Patient Assessment, Diagnosis, Treatment Planning and Informed Consent: Provide oral health care within the scope of general dentistry to include patient assessment, diagnosis, comprehensive treatment planning, prognosis, and informed consent.

B. Establishment and Maintenance of Oral Health

18: Provide oral health care within the scope of general dentistry to include communicating and managing dental laboratory procedures in support of patient care.

19: Provide oral health care within the scope of general dentistry to include replacement of teeth including fixed, removable and dental implant prosthodontic therapies.

VIII. Evaluation

Evaluation in the course will be based on your level of cognitive and psychomotor skills, your understanding of the didactic material, and your ability to apply fundamentals to simulated situations.

Students must pass EACH of the sections (Didactic and Psychomotor) with a grade of 72% to pass this course.

1) Didactic Section (50%): This section is given to assess your understanding and application of the didactic material. It includes a midterm, 3 out of 4 scheduled quizzes and a cumulative final examination that will cover all material. The lowest quiz grade will be dropped. The final didactic section grade will be the average grade between the 3 best quiz average, the midterm, and the final exam grades. Questions will be made from the lectures and the suggested reading material during the course. A minimum passing grade of 72% is required.

1A) Quizzes

The quiz is given at the beginning of a scheduled lab session for each team; you must be seated by the class's scheduled starting time. Those who arrive after five minutes or after the quiz begins will not be allowed to take the exam. Quizzes may be given at a time other than at the start of the lecture. For example during a break in the middle of a lecture, or at the end of the lecture. The time for the quiz will be determined by the course director.

1B) Written Exams

You will have a Midterm and a Final Exam. The final will be cumulative. Questions can be in the form of multiple choice, true/false, fill in the blank, drawings, short answer, patient box and/or essay.

2) Psychomotor Section (50%): This section is given to assess your psychomotor skills and your ability to apply fundamentals to simulated situations. There will be a total of 15 laboratory projects and 5 psychomotor examinations.
LABORATORY PROJECTS

Students are responsible for completing all assigned laboratory projects up to the course standards. Self-evaluation and the development of critical analysis are important in the learning process. For each project, you will be expected to evaluate your work on iRubric before asking a faculty member to critique the procedure.

https://www.rcampus.com/indexrubric.cfm

Username: operative
Password: operative

The grading criterion is designed to have the student grade him/herself first and then the faculty may agree or disagree with the student's self-assessment. Students will be expected to correct the errors but no grade changing will occur after corrections are made. All projects are graded pass/fail. You're responsible for turning the project sheet signed and completed by the attending faculty on the due date printed on the form.

Project 1: Cast Gold Bridge #18-20
Project 2: Provisional bridge fabrication for #18-20 using Snap
Project 3: Combination bridge #29-31 (#29 for PFM and #31 for Cast Gold)
Project 4: Provisional bridge fabrication #29-31 using Smart-Temp
Project 5: Custom tray fabrication for Fixed Prosthodontics
Project 6: Final Impression for bridge #18-20 using light/heavy PVS
Project 7: Margin Identification-Trimming for teeth #18-20
Project 8: PFM Bridge #11-13
Project 9: Provisional bridge fabrication #11-13 using Snap
Project 10: Provisional bridge cementation using TBNE for #18-20
Project 11: All Ceramic bridge #6-8
Project 12: Provisional Bridge fabrication #6-8 using Smart-Temp
Project 13: Fiber Post fabrication #8
Project 14: Cast Post and Core fabrication #8
Project 15: RBR #23-24 (single wing)
**Students who are absent from any project/s due date in this course for any reason other than an emergency (with proper documentation), will be required to turn in the missed project as soon as possible but no later than 1 week after their return to class.

**PSYCHOMOTOR EXAMS**

Psychomotor Exam 1: CAST GOLD Bridge PREPARATION (20%)

Psychomotor Exam 2: PFM Bridge PREPARATION (20%)

Psychomotor Exam 3: PFM Bridge PROVISIONAL (20%)

Psychomotor Exam 4: COMBINATION Bridge PREPARATION (20%)

Psychomotor Exam 5: COMBINATION Bridge PROVISIONAL (20%)

*The final psychomotor section grade will be the average grade between the 5 psychomotor examination grades as described above. Students must pass 3 of the 5 psychomotor examinations in this course to pass the course. A minimum passing grade of 72% is required.*

**RDS Departmental Course Policies:**

1. There will be no make-up quizzes. You are permitted to drop one (1) of the quizzes during the course.

   *The only exceptions are for hospitalization, family emergencies, and excused rotations. Students who are approved by the course director for a make up quiz in one of these rare and extreme circumstances will schedule to take the make up with Ms. Michelle Hopkins in D9-6 during business hours. The quiz may be in a different format (i.e. essay, fill in the blank, oral, etc.) than the original multiple choice quiz.*

2. Missed psychomotor examinations will require a doctor’s note and if excused, the make-up exam will be similar to the scheduled examination but may include different teeth and/or surfaces. The make-up examination must be scheduled within 2 business days of the missed exam or the student’s return to school. **The highest attainable grade on a missed exam is 85%**.

3. Missed written (Midterm or Final) or station examinations (Psychomotors) will require a doctor’s note and if excused, the make-up exam will be either an essay or oral examination. The make-up examination must be scheduled within 2 business days of the missed exam or the student’s return to school. **The highest attainable grade on a missed exam is 85%**.

4. Due to time constraints, there are no retake examinations during (within) courses. Students are required to demonstrate that they can pass the examinations they fail. This will be completed during the week set aside for remediation. These reassessment exams are required
to pass the course but they will not affect your grade at all, it serves to demonstrate you can move on to the next course.

5. If a course is failed, an “E” grade will be issued and the student will remediate the course.

6. **The psychomotor and didactic sections of each course must be passed with a minimum of 72% in order to pass the course.**

7. Students must pass the majority of the psychomotor examinations in the course to pass the course (3/5).

8. A student may not continue in the next course in a series if they do not successfully pass or successfully remediate the prior course. The course DEN6412 is the prerequisite for this course (DEN6415).

In order to pass this course (DEN6415C):

1. The didactic section must be passed independently with 72% or above
2. The psychomotor exams must be passed independently with 72% or above. You must pass 3 of the 5 examinations to pass this course.
3. A final grade of 72% or above – an average grade of didactic (50%) and the psychomotor portion (50%).
4. The Lab Project Sheet must be complete and turned in on the printed date of the form.

**Professional Conduct.**

The College of Dentistry expects all dental students to be professional in their dealings with patients, colleagues, faculty and staff. Professional and ethical conduct is a mandatory qualification for every practicing dentist.

Working on dentoform teeth outside of the dentoform or mannequin, positioning the dentoform in any unnatural position in the mannequin, working after the allotted working time is over, working on any teeth other than the exam teeth given to you the day of the exam, falsifying any documents, among others is a violation of the student honor code and will result in an automatic failing grade for entire course, immediate referral to the SPEC and may result in other sanctions as well. **The only exception is if a student inadvertently prepares the wrong tooth. This will result in an automatic failure for the exam and not for the entire course.**

Attendance and adherence to the dress code are mandatory. In addition, for each lecture and laboratory session, students are expected to be prepared, complete the self-assessment forms, follow all guidelines and instructions (which includes use of iPods, headphones, etc.), and put forth an excellent effort (work the entire lab session, work diligently and make every effort to get the most out of every session). Professional misconduct observed during lectures, exams, quizzes, and laboratory sessions will result in an Academic Variance (see Pre-doctoral Student Handbook). Five percentage points will be deducted from the final course grade for each
Adherence to the Dress Code. Students must adhere to the dress code as spelled out in the Pre-doctoral Student Handbook and Clinic Procedure Manual while enrolled in any course in the Division of Prosthodontics.

Please help us as we teach you to be the excellent healthcare providers you aspire to become in the future.

1. Use proper PPE and follow infection control protocols for patient care
2. Make yourself available to hear your patient and instructor and do not use headphones or play music at your station.
3. Use of phones should be limited to emergency situations. Please keep out of sight until the end of class.
4. Earplugs will be provided at the beginning of psychomotor examinations, including mock exams if you want to use them.

Remediation:

Students that receive an "E" grade in this course must meet with the course director and then schedule to take a written and/or a psychomotor remediation examination/s. A comprehensive written and/or practical exam will be provided.

Students failing the course will be awarded an "E" grade, referred to the Student Performance Evaluation Committee (SPEC), and automatically placed on academic probation. The student must meet with the course director to develop a remediation plan within one week of receiving the failing final grade. The remediation activities are at the discretion of the course director. Faculty members are available to assist students in preparing for this examination, but the responsibility for learning the material resides with the student. The time and place of the remediation examination will be arranged individually.

Please note that if the course director determines that the student failed the coursework to such an extent that remedial activities would be inadequate to attain an acceptable level of academic achievement in the course material, the course director can recommend that the student repeat the course as the remedial activity.

The grade required to pass the remediation program will be determined by the course director; however, the highest grade attainable in a remediated course is a remediated "D/R." Students failing to satisfactorily complete the remediation program will maintain the "E" grade and be referred to SPEC for further actions. Re-enrollment will occur as soon as deemed feasible by the course director in concert with the Associate Dean for Education and the SPEC. The highest final grade attainable when repeating a course in its entirety is an "A." Students failing to
In addition, the following adjustments will be made to the final course grades:

Attendance

- 5% points will be deducted from the psychomotor course portion final grade for each lab missed without an excused absence.
- 5% points will be deducted from the psychomotor course portion final grade for every three unexcused instances of tardiness.
- 5% points will be deducted from the psychomotor course portion final grade if the grading forms are not returned complete and signed by faculty by the date established by the course director when turned in after the due date.

Adherence to the Dress Code. Students must adhere to the dress code as spelled out in the Pre-doctoral Student Handbook and Clinic Procedure Manual while enrolled in any course in the Division of Prosthodontics. It is applicable at ALL times including, lectures, exams, quizzes, and laboratory sessions. Failure to comply with the dress code will result in a reduction in your final course grade as follows:

- **1st Offense** - You will be asked to leave the class and warned
- **2nd Offense** - You will be asked to leave the class and a 5% reduction in your final course percentage will be imposed
- **3rd Offense** - You will be asked to leave the class and a 10% reduction in your final course percentage will be imposed
- **4th Offense** - You will be asked to leave the class and a 15% reduction in your final course percentage will be imposed
- **5th Offense** - You will be issued an "E" grade in the course

Faculty Evaluation

“Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at [https://ufl.bluera.com/ufl/](https://ufl.bluera.com/ufl/). Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via [https://ufl.bluera.com/ufl/](https://ufl.bluera.com/ufl/). Summaries of course evaluation results are available to students at [https://gatorevals.aa.ufl.edu/public-results/](https://gatorevals.aa.ufl.edu/public-results/).”

Honorlock will proctor your exams this semester. Honorlock is an online proctoring service that allows you to take your exam from the comfort of your home. You DO NOT need to create an
account, download software or schedule an appointment in advance. Honorlock is available 24/7 and all that is needed is a computer, a working webcam, and a stable Internet connection. To get started, you will need Google Chrome and to download the Honorlock Chrome Extension. You can download the extension at www.honorlock.com/extension/install.

When you are ready to test, log into the LMS, go to your course, and click on your exam. Clicking Launch Proctoring will begin the Honorlock authentication process, where you will take a picture of yourself, show your ID, and complete a scan of your room. Honorlock will be recording your exam session by webcam as well as recording your screen. Honorlock also has an integrity algorithm that can detect search-engine use, so please do not attempt to search for answers, even if it's on a secondary device. Good luck! Honorlock support is available 24/7/365. If you encounter any issues, you may contact us by live chat, phone (844-243-2500), and/or email (support@honorlock.com). If you encounter issues within the LMS, you may contact Your School's Online Support Services team at their number.

IX. Administrative Practices

Administrative practices for all UFCD courses are universally applied. Exceptions to or deviations from these practices are stated in the individual syllabi by the course director. When not individually stated in the syllabus, course administrative practices default to those identified under "Course Policies" on the DMD Student Website:

https://dental.ufl.edu/education/dmd-program/course-policies/

X. Grade Scale

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