

DEN6407C: Preclinical Operative Dentistry II

Summer 2019

Course Description:

This course will involve the use of silver amalgam and resin-based composite to treat teeth injured by carious lesions from simple, single surface lesions to multiple surface lesions. This course also introduces the preparation and restoration of teeth with cast gold inlay/onlays.*

I. General Information

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Course Credits: 3

Semester: Summer

Office Hours:

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II. Course Goals

This is the second in a series of three courses, which are designed to provide the student with sufficient knowledge in the Operative Dentistry. In this course, the restorative treatment of Class II and Complex carious lesions using resin-based composite and amalgam will be particularly emphasized and based on the concepts of dental biomaterials and minimally invasive dentistry. In the end, this course will also include an introduction to the preparation and restoration of teeth with cast gold inlay/onlays.

III. Course Overview

Lectures and simulation laboratories will be utilized in this course to introduce fundamental concepts related to Operative Dentistry with focus on tooth preparation and restoration using dental amalgam and resin-based composites, and an introduction to the preparation and restoration of teeth with cast gold inlay/onlays.

This course will be divided into three modules:

Module 1- Amalgam Restorations

This module will focus on didactic Class II tooth preparations and the use of dental amalgam as a direct restorative material.

Module 2- Composite Restorations

This module will focus on more extensive didactic Class II tooth preparations and the use of different resin-based composites as direct restorative materials.

Module 3- Complex Restorations and Case-based Learning

This module will focus on didactic Complex tooth preparations and the use of dental amalgam and resin-based composite for Complex restorations.

In the end of Module 3, there will be an introductory training on the didactic preparation of tooth for cast gold inlay/onlays.

Successful completion of this course is required to progress to DEN6408C: Preclinical Operative III. It is a required pre-requisite; a student may not continue in the next course in a series if they do not successfully complete the prior course.

Syllabus Statement for courses participating in the Summer 2019 Pilot:

"Students in this class are participating in the pilot evaluation of the new course evaluation system called GatorEvals. The new evaluation system is designed to be more informative to instructors so that teaching effectiveness is enhanced and to be more seamlessly linked to UF's CANVAS learning management system. Students can complete their evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Please note your other classes this semester may be evaluated in the current GatorRater online evaluation system at <https://evaluations.ufl.edu>. Thank you for serving as a partner in this important effort."

IV. Course Outline

Module 1 – Amalgam Restorations

1. Amalgam as a Restorative Material
2. Principles of Amalgams
3. From Class I to Class II
4. Class II Amalgams

Module 2 – Composite Restorations

1. RBC Class II
2. Light Curing – Part II
3. Bulk Fill and Flowable Composites

Module 3 – Complex Restorations and Case-based Learning

4. Complex Restorations
5. Selection of Pulp Protective Materials
6. Selection of Restorative Dental Materials
7. Repair x Replacement of Restorations
8. Gold Preparations

V. Course Material

Textbooks¹:

1. Summitt's Fundamentals of Operative Dentistry - A Contemporary Approach by Hilton TJ et al, 4th ed., Quintessence, 2013.

2. Sturdevant's Art & Science of Operative Dentistry by Harald O. Haymann et al, 6th ed., Elsevier, 2016.

3. Phillips' Science of Dental Materials by Kenneth J. Anusavice et al, 12th ed., Elsevier, 2012.

¹Textbooks are electronically available through the [UF Libraries](#).

Other Resources:

All lectures, instructional videos, and other handouts will be posted on [E-learning](#).

VI. Course Objectives

The material in this course will be presented in lecture, web-based, simulation laboratory, and self-study format. You will demonstrate competency in the knowledge of the following and the ability to apply this knowledge to the practice of Dentistry:

Module 1 – Amalgam Restorations

Didactic

- Describe the characteristics and physical properties of dental amalgams.
- Discuss the indications and limitations of the use of the dental amalgam as a direct restorative material.
- Define the principles of tooth preparation for restorations using dental amalgam.
- Explain the protocols for restoring with dental amalgam.

Psychomotor

- Demonstrate the ability to prepare and restore teeth with dental amalgam.

Module 2 – Composite Restorations

Didactic

- Describe the characteristics and physical properties of the different resin-based restorative composites.
- Discuss the indications and limitations of the use of the different resin-based restorative composites.
- Define the principles of tooth preparation for restorations using composites.
- Explain the protocols for restoring with resin-based restorative composites.

Psychomotor

- Demonstrate ability to prepare and restore teeth with the different resin-based restorative composites.
- Demonstrate the ability execute the Open-Sandwich Technique in Class II restorations.

Module 3 – Complex Restorations and Case-based Learning

Didactic

- Discuss the possibility of repairing versus the need of replace of deficient restorations according to different clinical scenarios.
- Discuss the need and the use of different pulp protection materials according to different clinical scenarios.
- Discuss the use of different direct restorative materials according to different clinical scenarios.

Psychomotor

- Demonstrate the ability execute complex tooth preparations and restore it using the different direct restorative materials.

VII. Course Competencies

This course teaches the following competency (ies) in the ["Competencies for the New Dental Graduate".](#)

Domain VI: Patient Care

B. Establishment and Maintenance of Oral Health

17: Provide oral health care within the scope of general dentistry to include restoration of teeth.

VIII. Evaluation

The evaluation of the student performance will consist of:

1) Didactic Evaluation

Quizzes: There will be a total of six quizzes related to the content which has been previously covered in lecture and/or laboratory before each assigned quiz. The quiz with the lowest score will be dropped from each student's accumulated quiz total when determining course final grades. If a student misses a class for any reason, that quiz will be the one dropped. **There will be no make-up quizzes.**

Didactic Exams: There will be a total of two didactic examinations. These exams will cover all course material, including all lectures and assigned book chapters covered in each lecture, laboratory instructions, and group discussions given up to the respective exam date. The students in this segment of the Operative training must master concepts and techniques previously covered in Operative Dentistry I and Biomaterials.

Missed didactic examination(s) will require a doctor's note and if excused to the course director discretion, 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 an 85%.

All quizzes and/or didactic examinations will selectively use questions of multiple choices, T/F, matching, or short answer type.

2) Psychomotor Skills Evaluation

Psychomotor Exams: There will be a total of four psychomotor exams. **Completing assigned daily projects (*Orange Laboratory Routine Sheet*) before each of the psychomotor examinations makes one eligible to take the assigned psychomotor examination hereafter.** These competency exams will require tooth preparations and/or restorations using dental amalgam and resin-based composite (see details below). These exams will be evaluated to determine if psychomotor competency has been achieved and the scores of these exams will be included in determining the final course grade.

Psychomotor Exam 1 – Didactic Class II Preparation (overall time: 2h)

Psychomotor Exam 2 – Class II Amalgam Restoration (overall time: 1h)

Psychomotor Exam 3 – Class II Composite Restoration (overall time: 2h)

Psychomotor Exam 4 – Complex Restoration (overall time: 2h)

The grade of each psychomotor exam will be determined by the average of points received, which will be converted

into percentages as determined by the ***Operative Division Psychomotor Grade Scale***. An orderly decision-making process evaluates student performance. Procedural items are scored 4, 3, 2, or 1 against defined criteria.

- A 4 indicates that the criteria was met at an ideal level
- A 3 indicates that the criteria was met at an acceptable level
- A 2 indicates that modifications are necessary to achieve an acceptable level
- A 1 indicates that the outcome was measured to be at an unacceptable level

For each criterion, an evaluative modifier (+) can be assigned to a 1, 2, or 3 grade to indicate that the student identified an error prior to faculty evaluation. **The student in writing must note proper terminology and specific locations of all errors. General non-specific statements will not justify a (+) modifier.**

A "1" or "1+" score on any of the criteria on a psychomotor exam will result in an **automatic failing grade**. The percentage assigned is 65% or the actual score; whichever is lower when a score of 1 is given. The percentage assigned is 70% or the actual score; whichever is lower, when a score of 1+ is given.

Points are calculated as follows:

- 4 = 4 points
- 3+ = 3.25 points
- 3 = 3 points
- 2+ = 2.25 points
- 2 = 2 points
- 1+ = 0.25 point
- 1 = 0 points

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 an 85%.

Students who fail one or two psychomotor exam(s) will have to reassess at the end of the course. Due to time constraints there are no retake examinations during (within) courses. The reassessment will not affect the final course grade. **Students who fail more than two psychomotor exam(s)** will have to remediate (see more details below – remediation section).

ASSIGNING GRADES

The final grade will be determined based on the following didactic and psychomotor components*:

1. Didactic component - 45% (40% didactic exams + 5% quizzes)

- Exam 1: 20%
- Exam 2: 20%
- Quizzes: 5%

2. Psychomotor component - 55% (psychomotor exams)

- Psychomotor 1: 13.75%
- Psychomotor 2: 13.75%
- Psychomotor 3: 13.75%
- Psychomotor 4: 13.75%

*The final grade can be affected by academic variance(s), as described below:

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.

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 academic variance issued.**

Attendance

- 5 percentage points will be deducted from the final grade for each lecture or lab missed without an excused absence.
- 5 percentage points will be deducted from the final grade for every three unexcused instances of tardiness.
- 5 percentage points will be deducted from the final grade if the routine sheet is not returned complete by the date established by the course director.

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 Operative Dentistry. 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

In order to pass this course, you must have:

1. **A final grade of 72% or above (The grades for each component will be calculated based on the percentages given for each exam as listed above).**
2. **The didactic component must be passed independently with 72% or above. If the student fails to reach 72% or above will have to remediate.**
3. **The psychomotor components must be passed independently with a 72% or above and at least two of the four psychomotor exams must be passed with a score of 72% or above. (If the student fails 3 psychomotor exams and the final grade is more than 72% it is still considered a failure for the psychomotor component.)**

Remediation: 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 are available to assist students 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 course director will determine the grade required to pass the remediation program; 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 consideration for dismissal or retracting. For more information refer to the Administrative Practices, Section K: Remediation.

IX. Administrative Practices

Administrative practices for all UFCOD 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 "Administrative Practices" in the ECO sidebar for each electronic syllabus. These practices include: Professional Behavior, Student Responsibilities in the Classroom, Attendance, Dress Code, Email Policy, Tutoring, Academy Honesty and the Student Honor Code, Student Accommodations, Post-exam Review, Grading System, Remediation, Student Evaluation of Instruction, Student Complaints, University Counseling Services and Mental Health Services and Electronic Course Material and Social Media.

X. Grade Scale

DEN6407C Grade Scale

Method Letter Grade
Scale 100

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|-----------|------------|
| A | 95 - 100 |
| A- | 90 – 94.99 |
| B+ | 86 – 89.99 |
| B | 82 – 85.99 |
| B- | 80 – 81.99 |
| C+ | 74 – 79.99 |
| C | 72 – 73.99 |
| E | 0 – 71.99 |