

DEN6302C Introduction to Clinical Diagnosis and Treatment Planning

Spring 2021

Course Description:

This course prepares the student to conduct a thorough history and appropriate clinical examination of an adult dental patient, make diagnostic decisions based on collected data, formulate a problem list and properly sequence treatment modalities. The didactic and clinical components are designed to increase the integration of foundation knowledge, improve clinical thinking skills, and encourage decision-making based on evidence-based principles.

I. General Information

Course Director:

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Course Credits: 3
Semester: Spring

Contributing Faculty

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II. Course Goals

This course is designed to prepare the student to formulate a treatment plan based on the development of a thorough problem list and associated diagnoses. The student will learn the process of data collection which begins with the chief concern and covers the whole masticatory system integrating the knowledge of anatomy and other basic sciences. The goal then is for the student to move beyond data collection to understanding the whole patient and their specific problems. Acting as oral health detectives, each problem requires a diagnosis and an evidenced based diagnosis paired with an appropriate treatment. Finally, the student needs to interact with the patient to formulate a sequenced treatment plan that incorporates disease control and restoration to optimal oral health.

The goal for this course is the development of the ability to formulate a new patient treatment plan which incorporates the following:

1. Understanding the phases of a treatment plan, the reasoning behind the successive phases, and the progression (or lack thereof) from one phase to the next. The necessity for critical thinking and problem solving which involves a comprehensive examination, interpretation of the data into a thorough problem list, application of diagnoses for each problem, and sequencing of appropriate treatment into a logical sequence.
2. Diagnose specific treatment plans which treat oral disease and not just the symptoms with the integration of literature review and evidence based recommendations.
3. The necessity of rendering a comprehensive examination which involves the patient as the most important member of their health care team thereby enabling them to understand their own problems and participate more fully in the prevention and treatment of their oral disease. The goal for our patients is optimal oral health.

The educational goals of this course have been designed to prepare you to competently conduct a thorough history and appropriate clinical examination of an adult dental patient, make diagnostic decisions based on your data, formulate a problem list, properly sequence and organize treatment modalities. The didactic and clinical components are designed to increase the integration of foundation knowledge in small group activities, and encourage decisions based on evidence-based principles.

III. Course Overview

The course will use large group participation, small group seminars and clinical laboratory opportunities to develop skills in patient examination, clinical photography and data and treatment plan entry in AxiUM. (AxiUM is the electronic health record (EHR) and clinical

management system used by the College of Dentistry.) Didactic information will precede the related clinical activity. The small group activities will be designed to increase your integration of foundation knowledge, critical thinking and problem-solving skills using patient case simulations in AxiUM.

The process of the development of the two main treatment plans (Disease Control and Definitive) utilized at the College of Dentistry will be outlined phase by phase beginning with the systemic phase all the way to the maintenance phase. Each phase will be described with examples and cases that will be augmented with speciality faculty in specific disciplines. The primary goal of the course is to provide each student with the opportunity to critically think about each phase, practice the development of each phase, describe the progression from one phase to the next, and to be able to work independently to develop a treatment plan with a evidence based rationale for each phase of the treatment.

Initially, the course will begin with a treatment plan presentation that will be an example of what each student in DEN 6302C should emulate on the first appointment. Then weekly seminars will present each phase of the treatment plan. Lab exercises will teach intra-oral photography, extraoral and intraoral physical examination, and endodontic testing. Weekly cases will also teach the evaluation of dental radiographs, formation of problem list, patient diagnoses, sequenced treatment planning, and the delivery of the disease control plan for the adult dental patient. The definitive treatment plan will include two critical issues: discussion of the rationale for the determination of restorability of severely damaged teeth and the rationale for the decision for the restoration for a single edentulous space in the arch.

IV. Course Outline

Clinical Diagnosis and Treatment Planning (Fall semester)

1. Vitals signs and examination
2. Dental photography
3. Tobacco cessation
4. Preliminary impressions and study models

Clinical Diagnosis and Treatment Planning (Spring semester)

1. Medical history assessment
2. Dental history assessment
3. Phasing treatment plan
4. Present treatment plan
5. Complex treatment plan
6. Final Assessment and maintenance plan

1. The Health History: medical and dental
2. Vital Signs, Cranial nerve screen, Lymph node exam
3. Extraoral Exam: Head & neck, Muscles of Mastication, Facial Pain Evaluation
4. Extraoral Exam: TMJ/ Functional Occlusion
5. Intraoral Exam: hard/soft tissue, Endodontic, Cariology
6. Intraoral and Extraoral photography
7. Caries Diagnosis, Prevention, and Treatment
8. Caries risk assessment
9. Restoration Evaluation and Maintenance
10. Cervical Lesions – Diagnosis and Treatment
11. Orthodontic considerations
12. Periodontal Screening and Recording
13. Tobacco abuse intervention – Model of Change
14. Treatment Planning/Phasing
15. Planning treatment for patients with special needs -The Anxious or Fearful patient
16. Nutritional Risk and Intervention in Dental Caries
17. Patient Communication
18. Objectively structured clinical examination
19. Clinic Rotation Objectives
 - Each rotation session is 3 hrs on TBD days
 - Each Small Group is made up of 20-21 students divided into teams of 3 working as operator - patient - assistant.
 - Each clinical rotation session provides 45 minutes working time/ student with 15 minutes for operatory turnover between students.

V. Course Material

Required Texts:

"Treatment Planning in Dentistry" Stefanac and Nesbitt. This is available in the Health Center Bookstore. The book contains a CD-ROM needed for clinical exercises. ISBN#**ISBN:** 978-0-323-03697-9, 2007, Mosby

Recommended Text/Material:

"The Dental Reference Manual" Weinstein & Zientz. Springer Publishers. October 2016 (projected publication date) This book is a compilation of clinically relevant diagnostic skills in every discipline. Each chapter is written by academicians from different dental schools but mostly from UFCD.

"Clinical Pharmacology 2002" Gold Standard Multimedia - Computer Reference– Web based - available on clinical computer terminals.

Instruments:

For the clinical exam dates (check schedule) please check out exam kits from sterilization before each clinical session.

Laptops:

Everyone should bring their own laptop computer.

Dental Lib Guide: <http://guides.uflib.ufl.edu/dental>

VI. Course Objectives

1. Describe the components of a health record.
2. Discuss the organization and functions of the health and medications history forms used by the UFCD.
3. Given selected examples of patient information be able to properly format the information using the SOAP method.
4. Illustrate problems associated with obtaining an accurate and reliable health history from your dental patient.
5. Distinguish the dynamics behind patients' attitudes and behaviors in the dental environment – with special understanding of the anxious patient.
6. Demonstrate the techniques for obtaining accurate, valid vital signs and understand the medical and dental implications of your findings.
7. Demonstrate the techniques and understand significance of the cranial nerve screening examination, and otoscopic exam.
8. Demonstrate the techniques used to accurately perform a TMJ screening examination. Demonstrate the rationale and techniques used to examine the muscles of mastication, head and neck lymph nodes, as well as other significant structures.
9. Identify and understand the anatomic basis of selected intraoral hard and soft tissue structures.
10. Demonstrate the techniques used to examine the dentition and existing dental restorations.
11. Discriminate acceptable from unacceptable dental restorations.
12. Demonstrate the ability to know which teeth require endodontic testing and how to perform and interpret these tests.
13. Demonstrate the ability to diagnose caries radiographically and determine the need to treat surgically or otherwise.
14. Demonstrate the techniques for examining the occlusal scheme of your patient.
15. Demonstrate techniques for screening and recording periodontal status.
16. Given a data base on a mock dental patient, be able to organize, analyze, develop an appropriate problem list and suggest and defend treatment options.
17. Explain the rationale for evaluating the cariogenic status of a dental patient.

18. Distinguish the various levels of disease and discuss appropriate preventive and treatment options.
19. Distinguish the differences between the different phases of a treatment plan.
20. Given a mock dental patient demonstrate effective interpersonal communication and be able to collect selected data, organize and analyze the data, develop a problem list, recommend appropriate treatment and make proper progress note entries.
21. Produce a valid patient record for a classmate during supervised clinical exercises including medical history, physical examination, dental charting, evaluation of radiographs, and treatment plan with progress notes in SOAP format.

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.
- 3: Apply biomedical science knowledge in the delivery of patient care.

Domain II: Professionalism –

- 4: Ethical Standards: Apply principles of ethical decision making and professional responsibility.
- 5: Legal Standards: Apply legal and regulatory concepts related to the provision and/or support of oral health care services.
- 6: Appropriate Referral Provide oral health care within the scope of general dentistry to include recognizing the complexity of patient treatment and identifying when referral is indicated.

Domain III: Communication and Interpersonal Skills –

- 7: Communication Skills: Apply the fundamental principles of behavioral sciences using patient-centered approaches for promoting, improving and maintaining oral health.
- 8: Diversity: Manage a diverse patient population and have the interpersonal and communication skills to function successfully in a multicultural work environment.
- 9: Health Promotion & Disease Prevention: Provide oral health care within the scope of general dentistry to include health promotion and disease prevention.
- 10: Interprofessional Experiences: Communicate and collaborate with other members of the health care team to facilitate the provision of health care.

Domain V: Practice Management and Informatics –

11: Practice Management: Apply the basic principles and philosophies of practice management, models of oral health care delivery and how to function successfully as the leader of the oral health care team.

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.

13 : Assess Patients with Special Needs: Assess the treatment needs of patients with special needs.

Domain VI: Patient Care – B. Establishment and Maintenance of Oral Health

14: Assessment of Treatment Outcomes: Provide oral health care within the scope of general dentistry to evaluate the outcomes of treatment, recall strategies and prognosis.

15: Patient Management: Provide oral health care within the scope of general dentistry to patients in all stages of life.

16: Emergency Treatment: Provide oral health care within the scope of general dentistry to include dental emergencies.

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

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.

20: Provide oral health care within the scope of general dentistry to include periodontal therapy.

21: Provide oral health care within the scope of general dentistry to include local anesthesia and pain and anxiety control.

22: Provide oral health care within the scope of general dentistry to include hard and soft tissue surgery.

23: Provide oral health care within the scope of general dentistry to include malocclusion and space management.

24: Provide oral health care within the scope of general dentistry to include pulpal therapies.

25: Provide oral health care within the scope of general dentistry to include oral mucosal and osseous disorders.

26: Provide oral health care within the scope of general dentistry to include screening and risk assessment for head and neck cancer.

VIII. Evaluation

The course is divided in two sections.

The first section includes laboratory and clinic assignments, quizzes, group activities and individual projects. This portion is 30% of the grade

The second section is the final oral/written examination and the midterm examination. Together they comprise 70% of the final grade. The final exam and midterm exam **each** need to be passed individually with a minimum grade of 72% (not averaged).

A minimum of 72% is required to successfully pass the course and both the midterm and final exam must be passed individually with a minimum of 72%. Students that do not achieve a 72% on either the midterm examination or final examination will be given an opportunity to reassess the examination. This will include **one** additional opportunity to pass each of the exams within the course. The highest attainable grade in the reassessment examination is a 72%. Failure to achieve passing criteria after the one reassessment will result in an “E” grade for the entire course.

Course grade distribution:

Section 1

Assignments (5-10) 25%

Quizzes (2-5)* 05%

Section 2

Midterm Examination 20%

Final Examination 50%

*Number of quizzes and assignments will be at the discretion of the course director.

Midterm Examination

The midterm will be 5 essay questions.

Final Oral Examination

The oral exam is evaluated using a rubric that can be found in the “Document section” of the course. Students will receive a score of Exceeded Expectations, Meets Expectations or Below Expectations. A student who failed the oral exam, will have limited privilege in clinics and only can participate as an assistant.

Each question is worth 1 point and the minimum passing grade is 7 points (please refer to rubric).

Oral Examination: Students will be presented with a clinical scenario and 10 related questions in the following areas:

1. **Medical History & Implication**
2. **Problem List & Diagnosis**
3. **Radiology interpretation**
4. **Periodontal Diagnosis & Treatment**
5. **Endodontic Diagnosis & Treatment**
6. **Caries Risk / Disease Control**
7. **Restorability & Principles**
8. **Material Selection**
9. **Pathology Lesion & Treatment**
10. **Medical Emergency & Treatment**
11. **Restorative Considerations**
12. **Patient Management**

The best way to prepare for the oral examination is to study and orally practice the course objectives in this syllabus. Please go to the Course Objectives section on the syllabus for the complete list. These objectives were written to assist you in meeting the expectations for this section of the examination.

This is a 40-minute exam. The student **MUST** meet expectations based on the “Oral Examination Evaluation Rubric” posted in the “Document section”.

Oral/Final exam point scale

Exam points	Grade
0	0
0.5	5
1	10
1.5	15
2	20
2.5	25
3	30
3.5	35
4	40
4.5	45
5	50
5.5	55
6	60
6.5	65
7	72
7.5	75
8	80
8.5	85
9	90
9.5	95
10	100

Professional business attire is expected. Please check-in at your assigned room or zoom invitation 5 minutes prior to your scheduled oral examination time.

Oral Examination Objectives

Treatment Planning (DEN6502, DEN6302)

- Discuss the successive phases of a comprehensive treatment plan
- Expound on the reasons behind the progression (or lack thereof) from one treatment plan phase to the next
- Discuss the utilization of the problem list and its importance
- Defend the focus of the disease control phase
- Describe data to be collected and reviewed at the post-treatment assessment
- Discuss the process of acquiring a complete and thorough health history and how some findings might affect or alter your treatment
- Identify when a medical consult is necessary and the process of obtaining the consultation

Oral Pathology (DEN6351)

Provided with a brief patient history, image and/or radiograph:

- Identify common oral pathologies (i.e. Herpes, papilloma, condyloma, inflammatory papillary hyperplasia, cheek biting, geographic tongue, carcinomas, ulcers, candidiasis, epulis, xerostomia, osteitis, etc.)
- State common causes of oral pathologies
- Select commonly prescribed medications
- Discuss reasons for clinical manifestations

Medical History/Medical Emergency (DEN6440)

- Discuss the concepts of medical risk assessment of the dental patient
- Discuss the management of selected medical condition – The health status assessment (i.e. Diabetes, Angina, Stroke, Seizures, Asthma, Syncope, Allergic reaction, etc.)

Periodontology (DEN5127, DEN6502, DEN6421)

- Describe the various clinical parameters utilized in patient periodontal assessment
- Discuss the rationale for making a periodontal diagnosis and prognosis
- Identify the classification system in periodontology
- List the criteria used to differentiate periodontal diagnoses and corresponding treatment
- Define and differentiate gingivitis to periodontitis.
- Define and explain the rationale for Phase I evaluation, SPT interval and oral hygiene instructions
- Differentiate scalers, curettes and periodontal instruments and their uses.

Operative Dentistry (DEN5502, DEN5405, DEN6407, DEN6408)

- Discuss the philosophy of the Department of Restorative Dental Sciences in prevention, diagnosis, and management of the disease of caries
- Describe the clinical aspects and classification of dental caries
- Describe the contributing factors in the disease of caries and their interrelationship with tooth, saliva, diet, and systemic factors
- Discuss the importance of a caries risk assessment on every patient
- Describe the clinical decision-making process involved when a decision must be made to treat a tooth either surgically or non-surgically
- Describe the use and indication for non-surgical intervention in the management of dental caries including instructions to patients and products prescribed
- Describe the indications and reasons for using both rotary and hand instruments in cavity preparations
- Describe the rationale for using the rubber dam
- Describe the pulp-dentin reactions to dental caries and to cavity preparations
- Explain the principles of cavity preparation design
- Explain the tooth whitening process and protocol
- Explain the indications, contraindications, advantages, and disadvantages of the different restorative materials
- Explain the difference between the method of retention of amalgam, composite, and modified glass ionomer
- Explain the indications and contraindications of indirect esthetic inlay/onlay restorations
- Describe the techniques and steps involved in direct and indirect pulp capping

Prosthodontics (DEN6213, DEN6412, DEN6415, DEN6460)

- Demonstrate knowledge of Alginate impression material including, manipulation, disinfection, use and technique.
- Describe the technique and importance of mounting diagnostic casts when determining, diagnosis and treatment planning. Refer to the mounted diagnostic casts and treatment planning policy.
- Demonstrate proper knowledge of the preparation of the teeth according to biological, mechanical, and esthetic requirements.
- Identify the indications for a custom acrylic anterior guide table and describe how it is used.
- Discuss the relationship between anterior guidance and the occlusal morphology of posterior teeth.
- Differentiate between fixed restorations occlusion and removable complete denture occlusion
- Discuss the indications, contraindications, advantages, and disadvantages of a variety of indirect restorations (crowns/bridges)

- Describe the steps for tooth preparations (retention and resistance form; axial contour; occlusal design), provisional restorations, impression making, and fabrication (marginal adaptation; polish; adequate thickness, glaze, and esthetics) of restorations.
- Discuss the correct cementation procedures and the importance of a dry operating field.
- Describe how you would examine, diagnose, and develop a treatment plan for an edentulous patient that will be treated with complete dentures.
- Describe the steps involved in the fabrication of complete dentures
- Describe vertical dimension, plane of occlusion, centric relation, interocclusal space, tooth position, bilateral balanced occlusion.
- Describe the indications and technique for a fiber post and core build up vs. cast post and core

Endodontics (DEN6430, DEN6432)

- Assess pulpal and periradicular diagnosis based on case simulations
- Correlate objective exam findings to clinical endodontic diagnosis
- Describe the pulpal morphology and access cavity preparations
- Discuss how you would correct access errors
- Describe the anatomical determinants of “working length”

Infection Control (DEN5320)

- Describe proper infection control procedures associated with clinical patient care.
- Discuss the rationale for these procedures, including proper barrier technique, infection control related to impression making and cast formation.
- Discuss the UFCD protocol for needle stick and glove puncture injuries to health care workers.
- Discuss the UFCD protocol for a possible aspiration of a foreign body.

Professionalism (DEN5013, DEN5221, DEN6302C)

- Demonstrate basic communications skills,
- Utilize decision-making skills,
- Develop potential plans of action specific to the case
- Integrate professional values, which include excellence, altruism, responsibility, compassion, empathy, accountability, honesty and integrity.

Attendance:

The structure of this course mandates that you attend all class sessions to develop skills in critical thinking and clinical reasoning. You are expected to be prepared for AND actively involved in your assigned small group seminars. The majority of the student assessment weight will be based on thinking and reasoning, as opposed to identifying facts or one right answer.

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. Behavior of a dental student reflects on a student's qualification and potential to become a competent dentist. In addition, for each lecture and laboratory session, students are expected to: be prepared, complete the self-evaluation forms, follow all guidelines and instructions (which includes dress code, use of iPods, headphones, etc.), and put forth an excellent effort (stays the entire session, works diligently during the lab session, etc.). Any student professional misconduct observed during lectures, exams, quizzes, and laboratory sessions will result in an **Academic Variance Form** (see *Pre-doctoral Student Handbook*), and **5 points will be deducted from the final course grade for each academic variance issued.**

Attendance and adherence to the dress code are mandatory. In addition, for each lecture and laboratory session, students are expected to be prepared, follow all guidelines and instructions (which includes not using of air buds, 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 a Professional Variance (see *Pre-doctoral Student Handbook*).

In addition, the following adjustments will be made to the final course grades:

Attendance, Adherence to the Dress Code and Professional Conduct are Mandatory. The following adjustments will be made to the final course grades:

Attendance

- 5% will be deducted from the final grade for each lecture or lab missed without an excused absence.
- 5% will be deducted from the final grade for every three unexcused instances of tardiness.
- 5 % 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 always applicable 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

Reassessment and Remediation

Reassessment

Students that do not achieve a 72% on either the midterm examination or final examination will be given one additional opportunity to pass each of the exams within the course. The highest attainable grade in the reassessment examination is a 72%. Students will have one chance to reassess after meeting with the course director and assistant course director.

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 the notification of the failing final grade. The remediation activities are at the discretion of the course director. Faculty are available to assist students as they prepare for this examination, but the responsibility for learning the material resides with the student. The time, place, content, and passing grade of the remediation program will be individualized for each student and arranged by the course director. The highest grade attainable in a remediated course is a "D". 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.

This course must be passed successfully before students can provide patient treatment in the predoctoral clinics.

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 elect not to provide remediation

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

Grade Scale The following grade scale will be used:

A 72-100

E < 72