

## DENTAL HYGIENE CARE II (DHYG 2331)

### CREDIT

3 Semester Credit Hours (3 hours lecture)

### MODE OF INSTRUCTION

Face-to-face

### PREREQUISITE/CO-REQUISITE:

Prerequisite: DHYG 1301, DHYG 1431, DHYG 1304, DHYG 1235, DHYG 1103, DHYG 1219, DHYG 1339, DHYG 2301, DHYG 2133, DHYG 1260.

Co-Requisite: DHYG 1311, DHYG 1339, DHYG 2261.

### COURSE DESCRIPTION

A continuation of Dental Hygiene Care I. Dental hygiene care for the medically or dentally compromised patient including advanced instrumentation techniques.

### COURSE OBJECTIVES

Upon completion of this course, the student will be able to

- Apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry.
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills.
- Demonstrate appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

### INSTRUCTOR CONTACT INFORMATION

Instructor: Ronni Cruz, RDH, BS

Email: [rcruz@lit.edu](mailto:rcruz@lit.edu) (allow 24-48 hours for response time)

Office Phone: (409) 247-4884

Office Location: MPC 206

Office Hours: Mondays 12:30-4:00; Tuesdays 9:00-10:00  
Thursdays 7:30-8:00; Fridays 7:30-8:00

### REQUIRED TEXTBOOK AND MATERIALS

Nield-Gehrig, Fundamentals of Periodontal Instrumentation & Advanced Root Instrumentation, 8<sup>th</sup> edition, Lippincott, Williams, & Wilkins, 2017. ISBN: 9781496320209.

Boyd, Linda D., Mallonee, Lisa F., Wilkins' Clinical Practice of the Dental Hygienist, 14<sup>th</sup> edition, Jones & Bartlett Learning. ISBN: 9781284255997

Approved: **Initials/date**



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## COURSE CALENDAR

Topic		Assignments
<b>AUGUST</b>		
25	<b>Introduction to DH Care II</b> <b>Ultrasonic Introduction</b>  <b>*Bring Ultrasonic and inserts to class</b>	<b>*Ultrasonic Practice in the Clinic</b> <b>12:30pm – 3:30 pm- EVERYONE!</b> <b>Wilkins Chapter 37 Pgs. 706-712</b> <b>Periodontal Instrumentation Book</b> <b>Module 26</b>
27	<b>Fundamental of Ultrasonic Instrumentation for Complete Debridement Procedures</b> <b>Dentalcare.com assignment Due 8/29 @10:00pm</b>	<b>Wilkins Chapter 37 Pgs. 706-712</b> <b>Periodontal Instrumentation Book</b> <b>Module 26</b>
<b>SEPTEMBER</b>		
1	<b>No Class – Labor Day Holiday</b>	
3	<b>Area-Specific Curets</b>  <b>*Bring Typodont &amp; Gracey curets to class</b>	<b>Wilkins Chap.37 Pgs 704-705,738-743</b> <b>Periodontal Instrumentation Book</b> <b>Module 19 &amp; 21</b> <b>Watch video on “overview of Area Specific Curets”</b> <b>Watch Videos on:</b> <b>“Use of 11/12 Gracey Curet” and</b> <b>“Use of 13/14 Gracey Curet”</b> <b>Instrumentation Book’s resource</b>
8	<b>Advanced Instrumentation &amp; Root Debridement</b> <b>Advanced Fulcrum</b>  <b>*Bring Typodont &amp; Gracey curets to class</b>	<b>*Ultrasonic Practice in the Clinic</b> <b>12:30pm – 3:30 pm- EVERYONE!</b> <b>Wilkins Chap.37 Pgs 704-705,738-743</b> <b>Periodontal Instrumentation Book</b> <b>Module 19 &amp; 21</b> <b>Watch videos on “Advanced fulcrums on mx &amp; md arch”</b>
10	<b>Advanced Instrumentation &amp; Root Debridement – continued</b> <b>Gracey Lab Evaluation Sheet Due by 9/12 @ 10:00pm</b>	<b>Wilkins Chap.37 Pgs 704-705,738-743</b> <b>Periodontal Instrumentation Book</b> <b>Module 19 &amp; 21</b>
15	<b>Air Polishing</b>  <b>Special Instruments/ Dental Endoscope</b>	<b>*Gracey practice day in clinic</b> <b>12:30 pm - 3:30 pm- EVERYONE!</b> <b>Wilkins Chap.42 pg797-800, Chap 37 pg 705-706</b> <b>Periodontal Instrumentation Book Module 20 &amp; 27,</b>
17	<b>E-Portfolio Journal Entry #1 Due</b> <b>Class time for group work - Research Project</b> <b>Corrections/Modifications Due by Oct. 13 @ 11:59 pm</b>	<b>Submit corrected PowerPoint through Blackboard</b>

22	<b>EXAM 1</b>	
24	Arestin Webinar	Marie Markesberry, RDH
29	Arestin Adjunctive Therapy/ Antimicrobial Treatment	Wilkins Chapter 39 Pgs. 747-753
<b>OCTOBER</b>		
1	Local Anesthesia/Pain Management	Wilkins Chapter 36 Pgs 670-690 Periodontal Instrumentation Module 25
6	Local Anesthesia/Pain Management Con't Nitrous Oxide-Oxygen Sedation/Pain Management	Wilkins Chapter 36 Pgs 670-690 Wilkins Chapter 36 Pgs. 661-670 Periodontal Instrumentation Module 25
8	Nitrous Oxide-Oxygen Sedation/Pain Management Con't	Wilkins Chapter 36 Pgs. 661-670 Periodontal Instrumentation Module 25
13	Finish previous topics E-Portfolio Journal Entry #2 Due Research Project corrections Due @ 11:59 pm	Submit corrected PowerPoint through Blackboard
15	<b>EXAM 2</b>	
20	Patients with a Disability	Wilkins Chapter 51
22	Patient with Neurologic Disorders & Stroke	Wilkins Chapters 52
27	Patient with Neurologic Disorders & Stroke – cont'd	Wilkins Chapters 52
29	Respiratory Disease	Wilkins Chapter 60
<b>NOVEMBER</b>		
3	Respiratory Disease - continued	Wilkins Chapter 60
5	Patient with Autoimmune Disease	Wilkins Chapter 63
10	Patient with Autoimmune Disease - continued	Wilkins Chapter 63
12	Medically Compromised Pt Presentations	
15	Research Presentation Final Slide Due @10:00PM	Submit through Blackboard
17	Medically Compromised Pt Presentations	
18	Research Project Presentations to Sabine Dental Hygiene Association	6:00 PM in the MPC
19	Medically Compromised Pt Presentations	
24	<b>Exam 3</b>	
26	<b>NO CLASS – THANKSGIVING HOLIDAY</b>	
30	Community Service Journal Entry Due @10:00pm	Submit through Blackboard
<b>DECEMBER</b>		
1	Class Activity - E-Portfolio Journal Entry #3 Due	Submit through Blackboard
3	Wrap up/ Review/ Medically Compromised Patient Presentation Assignment Due @10:00pm	
5	Medically Compromised E-Portfolio Entry Due	Submit through Blackboard
TBD	Comprehensive Final	

## ATTENDANCE POLICY

### ***Absenteeism***

To ensure the students in the dental hygiene program achieve the necessary didactic and clinical competencies outlined in the curriculum, it is necessary that the student complete all assigned lecture classes, clinical and laboratory hours. It is the responsibility of the student to attend class, clinic or lab. The instructor expects each student to be present at each session.

It is expected that students will appear to take their exams at the regularly scheduled examination time. Make-up examinations will be given **only** if the absence is due to illness (confirmed by a physicians' excuse), a death in the immediate family, or at the discretion of the instructor.

If students are unable to attend lecture class, clinic or lab, it is **mandatory that you call the appropriate instructor prior to the scheduled class, clinic or lab time. An absence will be considered unexcused if the student fails to notify the course faculty prior to the start of class, clinic, or lab. Attendance through Blackboard Collaborate is considered an absence. The course instructor must be notified at least one hour prior to the beginning of class/lab if the student plans to attend through Blackboard Collaborate.** The student is responsible for all material missed at the time of absence. Extenuating circumstances will be considered to determine if the absence is excused. Extenuating circumstances might include but are not limited to funeral of immediate family member, maternity, hospitalization, etc. If the student has surgery, a debilitating injury, or an extended illness, a doctor's release will be required before returning to clinic.

#### a. **Fall/Spring Semesters:**

Dental hygiene students will be allowed **two excused absences** in any lecture, clinic or lab. Absences must be accompanied by a written excuse on the next class day. In the event that a student misses class, clinic, or lab beyond the allowed absences, the following policy will be enforced:

2 absences = notification in Starfish

Beginning with the third absence, **2 points** will be deducted from the final course grade for each absence thereafter.

**Two** (2) points will be deducted from the final course grade for each unexcused absence.

### ***Tardiness***

Tardiness is disruptive to the instructor and the students in the classroom. A student is considered tardy if not present at the start of class, clinic or lab. It is expected that students will arrive on time for class, clinic or lab, and remain until dismissed by the instructor. If tardiness becomes an issue, the following policy will be enforced:

Tardy 1 time = notification in Starfish

Tardy 2 times = is considered an unexcused absence. (See the definition of an unexcused absence)

If a student is more than 15 minutes late to any class period, it will be considered an unexcused absence.

**Students should plan on attending classes, labs and clinic sessions as assigned throughout the semester. Family outings, vacations and personal business should be scheduled when school is not in session and will not be considered excuses for missing assignments, examinations, classes, labs or clinic time.**

#### **DROP POLICY**

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the [Academic Calendar](#). If you stop coming to class and fail to drop the course, you will earn an “F” in the course.

#### **STUDENT EXPECTED TIME REQUIREMENT**

For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16- week session OR approximately twelve to eighteen hours in an 8-week session. Online/Hybrid students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

#### **ACADEMIC DISHONESTY**

Students found to be committing academic dishonesty (cheating, plagiarism, or collusion) may receive disciplinary action. Students need to familiarize themselves with the institution’s Academic Dishonesty Policy available in the Student Catalog & Handbook at <http://catalog.lit.edu/content.php?catoid=3&navoid=80#academic-dishonesty>.

#### **TECHNICAL REQUIREMENTS**

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at <https://lit.edu/online-learning/online-learning-minimum-computer-requirements>. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

#### **DISABILITIES STATEMENT**

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles’ Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email [specialpopulations@lit.edu](mailto:specialpopulations@lit.edu). You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#).

#### **STUDENT CODE OF CONDUCT STATEMENT**

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at [www.lit.edu](http://www.lit.edu). Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

## ARTIFICIAL INTELLIGENCE STATEMENT

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI/ChatGPT in their courses.

## STARFISH

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members' record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

## ADDITIONAL COURSE POLICIES/INFORMATION

### *Examination and Quiz Policy*

#### *Assignment, Examination and Quiz Policy*

Examinations will be based on objectives, lecture notes, handouts, assigned readings, audiovisual material and class discussions. Major examinations will consist of multiple choice, true/false, matching, short answer, and case study questions. No questions will be allowed during exams.

Students are expected to complete examinations as scheduled. Make-up examinations will be given ONLY if the absence is due to illness (confirmed by a physicians' excuse), a death in the immediate family, or at the discretion of the Instructor. All make-up examinations must be taken within two (2) weeks from the scheduled exam date. All examinations will be kept on file by the Instructor. Students may have access to the examination by appointment during the Instructor's office hours. Exams may be reviewed up to two (2) weeks following the exam date. **You may not copy, reproduce, distribute or publish any exam questions.** This action may result to dismissal from the program. A grade of "0" will be recorded for all assignments due on the day of absences unless prior arrangements have been made with the Instructor.

Students must use their personal equipment, such as computer, MacBook, laptop, iPad, to take their exams and must not use their classmates'. School computers may be used if personal equipment is not available. Respondus Lockdown Browser and Respondus Monitor will be used for examinations; therefore, a webcam is required to take the exam. The student is required to show the testing environment at the beginning of the exam to assure the instructor that it is clear of any study materials. Failure to do so will result in a 10-point exam grade deduction. If you need online assistance while taking the test, please call Online Support Desk at 409-951-5701 or send an email to [lit-bbsupport@lit.edu](mailto:lit-bbsupport@lit.edu).

It shall be considered a breach of academic integrity (cheating) to use or possess on your body any of the following devices during any examination unless it is required for that examination and approved by the instructor: cell phone, smart watch/watch phone, electronic communication devices (including optical), and earphones connected to or used as electronic communication devices. It may also include the following: plagiarism, falsification and fabrication, use of A.I., abuse of academic materials, complicity in academic dishonesty, and personal misrepresentation. Use of such devices during an examination will be

considered academic dishonesty. The examination will be considered over; the student will receive a zero for the exam and will receive disciplinary action. This policy applies to assignments and quizzes.

Students with special needs and/or medical emergencies or situations should communicate with their instructor regarding individual exceptions/provisions. It is the student's responsibility to communicate such needs to the instructor.

### ***Mandatory Tutoring***

If a student receives a failing grade on any major exam, the student will be required to meet with course instructor within 2 weeks of the failed exam. One on one concept review by appointment with the course instructor will be provided and/or written academic warning when a student is failing to meet minimal requirements in the classroom setting.

### ***Electronic Devices***

Portable electronic devices may only be used in class or lab for accessing approved course content (e-book, slides, publisher content, Blackboard, etc). Texting or web browsing will not be allowed during class, lab, or clinic.

### ***Late coursework***

Assignments, Quizzes and Tests must be completed by the due date. Late submissions or completion will not be accepted and will result in a zero for that assignment/quiz/test.

### ***Remediation***

Remediation is available by appointment.

See Student Handbook for more information about remediation policies.

**\* Faculty has the authority to modify the above policies if unusual circumstances mandate a change. Please refer to the Student Handbook for a complete listing of program policies.**

## **COURSE REQUIREMENTS**

### **COURSE EVALUATION**

Final grades will be calculated according to the following criteria:

3 Exams	55%
Research Project Presentation	15%
Medically Compromised Presentation	10%
Final Exam Grade	15%
E-Portfolio	5%

### **GRADING SCALE**

The student must pass the course with a 75% or more to receive credit for DHYG 2153. Failure to complete course work will result in the grade of "F" being awarded for DHYG 2153 and dismissal from the DH program. Exclusions from this policy will be dealt with on an individual basis by the instructor.

A	=	92 - 100
B	=	83 - 91
C	=	75 – 82
D	=	60 - 74
F	=	59 and below

LIT does not use +/- grading scales

## **COURSE OUTLINE**

- I. Nonsurgical Periodontal Therapy and Adjunctive Therapy
  - A. Advanced Instrumentation
    - 1. Definitions
    - 2. Subgingival Anatomic considerations
    - 3. Instrumentation Technique
  - B. Specialized Debridement Instruments
    - 1. Furcation Debridement
    - 2. Advanced Ultrasonic/Piezoelectric Tips
    - 3. Subgingival Air Polishing
    - 4. Laser Therapy
- II. Advanced Fulcrums
  - B. Define root debridement
  - C. Objectives and benefits of root debridement
  - D. Instrumentation techniques for effective root debridement
  - E. Design, Uses and Effective instrumentation with specialized instruments
    - 1. Site-Specific curets
    - 2. After five curets
    - 3. Mini five curets
    - 4. Diamond-coated instruments
    - 5. Endoscope
    - 4. Hoe
    - 5. File
    - 6. Chisel
- II. Air Powder Polishing
  - A. Principles of Application
  - B. Specially Formulated Powders for Use in Air-Powder Polishing
  - C. Uses and Advantages of Air-Powder Polishing
  - D. Technique
  - E. Recommendations and Precautions
  - F. Risk Patients: Air-Powder Polishing
- III. Powered Instrumentation
  - A. Powered Instruments
    - 1. Mechanism of Action
    - 2. Indications for Use
    - 3. Contraindications
    - 4. Risks and considerations
    - 5. Types
  - B. Sonic Scalers
  - C. 1. Mechanism of Action
  - C. 2. Equipment
  - C. Magnetostrictive Ultrasonic Scalers
    - 1. Mechanism of Action
    - 2. Equipment
  - D. Piezoelectric Ultrasonic Scalers
    - 1. Mechanism of Action
    - 2. Equipment



- E. Powered Instrumentation Technique
  - 1. Insert/Tip Selection
  - 2. Power Setting
  - 3. Water Setting
  - 4. Grasp
  - 5. Fulcrum/Rest
  - 6. Adaptation
  - 7. Activation/Stroke
- F. Dexterity Development
  - 1. Squeezing
  - 2. Stretching
  - 3. Pen/Pencil Exercises
  - 4. Refining Use of Mouth Mirror and Cotton Pliers
  - 5. Increasing Tactile Sensitivity
- G. Cumulative Trauma
  - 1. Risk Factors for Trauma
  - 2. Preventing Trauma

#### IV. Local Anesthesia

- A. Pharmacology of Local Anesthetics
  - 1. Contents of a Local Anesthetic Cartridge
  - 2. Ester and Amide Anesthetic Drugs
  - 3. Specific Characteristics of Amide Drugs
  - 4. Vasoconstrictors
  - 5. Criteria for Local Anesthetic Selection
- B. Indications for Local Anesthesia
  - 1. Dental Hygiene Procedures
  - 2. Patient Factors
- C. Patient Assessment
  - 1. Sources of Information for Complete Preanesthetic Assessment
  - 2. Treatment Considerations Based on Assessment Findings
  - 3. General Medical Considerations
  - 4. Specific Medical Considerations
- D. Armamentarium for Local Anesthesia
  - 1. Syringe
  - 2. Needle
  - 3. Cartridge or Carpule
  - 4. Additional Armamentarium
  - 5. Sequence of Syringe Assembly
  - 6. C-CLAD System
- E. Clinical Procedures for Local Anesthetic Administration
  - 1. Injection(s) Selection
  - 2. Aspiration
  - 3. Sharps Management
- F. Potential Adverse Reactions to Local Anesthesia
  - 1. Adverse Drug Reactions
  - 2. Psychogenic Reactions
  - 3. Local Complications
- G. Advantages and Disadvantages of Local Anesthesia
  - 1. Advantages

- 2. Disadvantages
- H. Noninjectable Anesthesia
  - 1. Armamentarium and Pharmacology
- I. New Developments in Pain Control
  - 1. Anesthesia Reversal Agent
  - 2. Buffered Local Anesthetic
  - 3. Intranasal Dental Anesthetic
  - 4. Periodontal Anesthetic Kit
- V. Nitrous Oxide-Oxygen Sedation
  - A. Characteristics of Nitrous Oxide
    - 1. Anesthetic, Analgesic, and Anxiolytic Properties
    - 2. Chemical and Physical Properties
    - 3. Blood Solubility
    - 4. Pharmacology of Nitrous Oxide
  - B. Equipment for Nitrous Oxide-Oxygen
    - 1. Compressed Gas Cylinders
    - 2. Gas Delivery System
    - 3. Nasal Hood, Nose Piece, and Mask
    - 4. Scavenger System
    - 5. Safety Features
    - 6. Equipment Maintenance
  - C. Patient Selection
    - 1. Indications
    - 2. Contraindications
  - D. Clinical Procedures for Nitrous Oxide-Oxygen Administration
    - 1. Patient Preparation
    - 2. Equipment Preparation
    - 3. Technique for Gas Delivery
    - 4. Completion of Sedation
  - E. Potential Hazards of Occupational Exposure
    - 1. Issues of Occupational Exposure
    - 2. Methods for Minimizing Occupational Exposure
  - F. Advantages and Disadvantages of Nitrous Oxide-Oxygen Sedation
    - 1. Advantages
    - 2. Disadvantages
- VI. Medically Compromised Patient
  - A. Indications and contraindications for dental treatment
  - B. Emergency management of medically compromised patients
  - C. Periodontal management of medically compromised patients
  - D. Recall intervals for medically compromised patients
  - E. Medical conditions addressed include:
    - 1. Oral surgery/Maxillofacial surgery patient
    - 2. Patient with a Neurodevelopmental Disorder
    - 3. The Patient with a Disability
    - 4. Neurologic Disorders and Stroke
    - 5. The Patient with a Seizure Disorder
    - 6. The Patient with a Mental Health Disorder
    - 7. The Patient with a Substance-Related Disorder
    - 8. The Patient with a Respiratory Disease
    - 9. The Patient with a Blood Disorder

## **LEARNER OBJECTIVES**

### **Powered Instrumentation**

1. Given information about oral conditions and general health status, identify those patients for whom powered instrumentation is or is not an appropriate choice.
2. Describe the advantages and disadvantages of ultrasonic instrumentation.
3. Briefly describe how the powered instrument removes deposits.
4. Identify precautions that must be taken to minimize cross-contamination during powered instrumentation.
5. Identify four important measures for helping the patient cope with water flow.
6. Describe the procedure for preparing an instrument insert for use in an ultrasonic unit.
7. Compare and contrast standard-diameter and slim-diameter instrument tip design.
8. Describe the best sequence and stroke pattern for effective biofilm & calculus removal using powered instrumentation.
9. Describe the length and speed of the stroke used during powered instrument.
10. Contrast powered instrumentation principles with those employed with hand instruments.
11. List three functions of the water lavage in ultrasonic instrumentation.
12. Briefly describe research findings related to effectiveness, tissue response, root smoothness, and safety precautions concerning powered instrumentation.
13. Discuss the differences in the magnetostrictive, piezoelectric and sonic scalers.

### **Advanced Instrumentation and Root Debridement**

1. Given a variety of area-specific curets, identify the design characteristics of each instrument.
2. Name the uses of area-specific curets.
3. Describe how the clinician can use visual clues to select the correct working-end of an area-specific curet on anterior and posterior teeth.
4. Describe characteristics of root morphology that make root instrumentation challenging.
5. Define root debridement.
6. List benefits of root debridement.
7. State the primary objective of root debridement.
8. Compare root debridement to scaling.
9. Identify instruments utilized for root debridement.
10. Describe the technique used and evaluation of root debridement.

### **Special Instruments**

1. Identify the use of diamond-coated instruments
2. Describe an endoscope and its purpose.
3. Identify the use of the hoe.
4. Describe the design of the hoe.
5. Describe principles of instrumentation with the hoe.
6. Identify three contraindications for utilization of the hoe.
7. Identify the use of the file
8. Describe the design of the file.
9. Describe principles of instrumentation with the file.
10. Describe the design of the chisel.
11. Identify three areas in which the chisel is appropriate for use.
12. Describe the application of the chisel for instrumentation.

**Air Polishing**

1. List the uses of Air polishers.
2. List the contraindications for using air polishers.
3. Describe the mode of action and effects of the air polisher.
4. Discuss instrumentation techniques and precautions.

**Local Anesthesia**

1. Describe the procedure for injection site preparation.
2. Classify local anesthetics.
3. Define block anesthesia.
4. Define infiltration anesthesia.
5. Describe the appropriate tray set-up for injection.
6. Identify the nerve and structures anesthetized and needle position for each injection site.

**Nitrous Oxide-Oxygen Sedation**

1. Define nitrous oxide and oxygen conscious sedation.
2. List indications/contraindications for nitrous oxide sedation.
3. Describe the history of nitrous oxide sedation.
4. List benefits of nitrous oxide.
5. Describe the mechanism by which nitrous oxide works.
6. Define conscious according to the ADA.
7. Describe normal responses to nitrous oxide sedation.
8. State properties of nitrous oxide.
9. Give and be able to utilize the equation for determining nitrous oxide concentration.
10. List signs and symptoms in response to nitrous oxide sedation by % of nitrous concentration.
11. State the acceptable concentration range for maximum nitrous oxide sedation.
12. Describe factors affecting the concentration needed for nitrous oxide sedation.
13. Describe the procedure for patient selection and list contraindications.
14. Define hypoxia and how to avoid hypoxia.
15. Describe the equipment used for nitrous oxide sedation.
16. Describe the procedure for administration of nitrous oxide sedation.

**The Patient with a Disability**

1. Describe the purpose of the American with Disabilities Act
2. Identify and define key terms and concepts relating to individuals with disabilities.
3. Identify risk factors for oral diseases associated with disabling conditions.
4. Describe factors that enhance the prevention of oral disease for individuals with disabilities and their caregivers.
5. Explain procedures and factors that contribute to safe and successful management of individuals with disabilities during dental hygiene care.
6. Outline a plan for continuing care for a patient with a disability.

**The Oral Surgery and Maxillofacial Surgery Patient**

1. Discuss the role of the dental hygienist in the pre- and postsurgery care of the oral and maxillofacial surgery patient.
2. Discuss pre- and postsurgical care planning for the maxillofacial surgery patient.
3. Identify types of maxillary and mandibular fractures and discuss treatment options.
4. Describe modifications for dental hygiene treatment, diet, and personal oral care procedures needed after maxillofacial surgery.
5. Explain dental hygiene care needed before and after general surgery.

**The Patient with a Cleft Lip and/or Palate**

1. Describe the types of cleft lip and palate that result from developmental disturbances.
2. Identify and describe the roles of the professionals on the interdisciplinary team for the treatment of a patient with cleft lip and/or palate.
3. Recognize the oral characteristics a patient with cleft lip and/or palate may experience.
4. Explain how to adapt the dental hygiene appointment sequence for a patient with cleft lip and/or palate.

#### **The Patient with a Mental Health Disorder**

1. Describe the various types of mental health disorders and major symptoms.
2. Summarize the side effects of treatment for mental health disorders that may have oral health implications.
3. Explain dental hygiene treatment considerations for each major category of mental health disorder.

#### **The Patient with a Neurodevelopmental Disorder**

1. Define and describe neurodevelopmental disorders.
2. Give examples of the characteristics, oral findings, and health problems significant for providing dental hygiene care for patients with:
  - Intellectual Disorder
  - Down syndrome
  - Autism spectrum disorder
3. Recognize adaptations necessary for providing dental hygiene care for a patient with a neurodevelopmental disorder.

#### **The Patient with a Seizure Disorder**

1. Define each term associated with the type of seizure disorder.
2. Discuss the etiology of seizure disorders.
3. Describe the clinical manifestations of seizure disorders.
4. Develop a dental hygiene care plan, including patient education prevention strategies, for working with patients who have seizure disorders.
5. Describe emergency care procedures to employ when a seizure occurs.

#### **Neurologic Disorders and Stroke**

1. Identify and define key terms and concepts related to physical impairment.
2. Describe the characteristics, complications, occurrence, and medical treatment of a variety of physical impairments.
3. Identify oral factors and findings related to physical impairments.
4. Describe modifications for dental hygiene care based on assessment of needs specific to a patient's physical impairment.

#### **The Patient with a Substance-Related Disorder**

1. Explain key terms and concepts related to the metabolism, intoxication effects, and use patterns of alcohol.
2. Identify physical health hazards, medical effects, and oral manifestations associated with alcohol and substances of abuse.
3. Interpret names of the most commonly abused drugs and describe their intoxication effects and methods of use.
4. Discuss modifications for the dental hygiene process of care for patients with substance use disorder. Recognize patients who are cognitively impaired and cannot provide informed consent and be treated in a safe manner.
5. Employ the National Institute on Drug Abuse Quick Screen to assess patients who are at risk for alcohol or substance abuse and provide resources for the patient to seek help.

**The Patient with a Respiratory Disease**

1. Identify and define key terms and concepts related to respiratory diseases.
2. Differentiate between upper and lower respiratory diseases.
3. Describe the etiology, symptoms, and management of respiratory diseases.
4. Plan and document dental hygiene care and oral hygiene instructions for patient with compromised respiratory function.

**The Patient with an Autoimmune Disease**

1. Describe how autoimmune diseases affect the immune system.
2. Identify various types of autoimmune diseases and the identifying symptoms and treatment.
3. Plan dental hygiene care modifications for the patient with an autoimmune disease.

# APPENDIX

# Grade Computation Sheet

## Test Grades:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Test Average: \_\_\_\_\_

(Total 3 exams and divide by 3 for average)

Test average:	_____	X .45 =	_____+
Research Project Presentation:	_____	X .15 =	_____+
Medically Compromised Presentation:	_____	X .15 =	_____+
Final Exam Grade:	_____	X .20 =	_____+
E-Portfolio Entries (5)		X .05 =	_____
Total of above:			_____
Final Grade:			_____



## Instructions for Magnetostrictive Ultrasonic Practice

### **Needed Supplies:**

- Ultrasonic insert tips
- Face shield
- Mask
- Gloves
- Nitrile gloves
- Ultrasonic Skill evaluation from clinic syllabus
- Instrumentation book – page 708

### **Set Up:**

- Without gloves take the unit out of the box/container
- Connect the power cord, water line and foot pedal
- Set up the head in the patient chair with your typodont

### **Disinfect:**

- With nitrile gloves disinfect the cart, unit and hose

### **Barrier:**

- Remove nitrile gloves, wash hands and put on exam gloves
- Place a barrier across the cart covering the unit
- Attach the handpiece and place on top of the barrier

Turn on the power and place black handpiece sleeve on to cord

Purge the water line for 2 minutes over the sink

Fill handpiece with water & lubricate o-ring on insert

Insert your universal tip

Adjust the spray to a fine mist

Universal tip	Use power setting from halfway mark to high power For heavy to light deposits
Slim line tip	Use power setting from low power to halfway mark For light deposits and root smoothing

You will practice strokes that were demonstrated in class. Each operator will complete **Module 26 Skill Application** for Powered Instrumentation in the Instrumentation Book on **page 708**. This will be checked by the instructor but not turned in for a grade. The first operator will practice while the second operator suctions with the high-speed suction. Clinic faculty will assist you as needed.

## Instructions for Area Specific Curet and Advanced Fulcrum Practice

### **Needed supplies:**

- Gracey curets (1/2, 11/12, 13/14, 15/16, 17/18)
- Typodont
- Instrumentation book
- This page is needed for Area designations

### **Set up:**

- Set up head with your typodont
- Have available area specific curets 1/2, 11/12, 13/14 or 1/2, 15/16, 17/18

You do not need to disinfect or barrier for this practice.

You will practice strokes with your area specific curets and advanced fulcrums that were demonstrated in class. You will practice in pairs.

Each operator will do the following skill application modules in the instrumentation book:

- Module 19 Area Specific Curets on pages 485-486.
  - Area 1 = Teeth # 3, 7
  - Area 2 = Teeth # 12, 15
  - Area 3 = Teeth # 19, 24
  - Area 4 = Teeth # 27, 31
- Module 21 Advanced Techniques for Root Surface Debridement on page 563

Clinic faculty will assist you as needed. You will be instructed when to switch operators. The skill evaluations will be checked by the instructor but not turned in for a grade.

## **MEDICALLY COMPROMISED PATIENT PRESENTATION CRITERIA**

The purpose of this project is to familiarize the student with the medically compromised patient and to supply appropriate treatment methods for these patients. It also gives the student an opportunity to research a topic and make an oral presentation to their peers. This project will consist of an oral report along with a PowerPoint presentation.

A minimum of two references should be used in this presentation (references should be no older than 5 years). One reference may be obtained from the internet, and you may use the information from the Wilkins textbook. The reference from the internet must be from a reputable source. (not Wiki, etc.) You may want to reference some of the National Board review books to see what type of information may be referred to on the National board concerning some of these topics.

The oral report will be 15-20 minutes in length. At the end of the report, provide 3 multiple choice test questions related to the report. Review the test questions with the class.

Upload the PowerPoint presentation, the test questions and a bibliography of your references to the instructor through Blackboard.

Students will be randomly assigned in groups of two or three and will be assigned to one of the topics above to research. Thorough research of the medical condition should be completed by the group. Special attention should be paid to treatment of the condition, how the condition impacts oral health and dental treatment, including contraindications, management, and emergency protocol for the patient with this condition.

This presentation will be 10% of the grade for DHYG 2331.

## **MEDICALLY COMPROMISED PATIENT**

### **PROJECT INFORMATION**

Grading rubric for this project can be found on the following page of this syllabus. Additional information for use in completing your presentation includes, but is not limited to, the following:

**Thoroughly research the condition/disease you have chosen.**

- Etiology
- Occurrence and in what population
- Treatment of condition
- Medications used in treatment

**What are dental concerns associated with this disease/condition?**

- Indications and contraindications for dental treatment
- How will oral health be impacted
- Will medical treatment and/or medications impact oral health? How?
- Periodontal management of this patient

**What would be expected and accepted treatment options for a patient with this disease/condition?**

- Pre-med
- Patient positioning
- Appointment length
- Ultrasonic use
- Recall intervals

**Is there a possibility for a medical emergency with a patient with this disease/condition?**

- Preparation of a possible emergency
- Avoidance of an emergency
- Management of an emergency

<p align="center"><b>DHYG 2331</b></p> <p align="center"><b>Medically Compromised Patient Presentation Evaluation</b></p>			
LIT Competency Statements	<p>CC2. Assume responsibility for dental hygiene actions and care based on accepted scientific theories and research as well as the accepted standard of care.</p> <p>CC4. Communicate effectively with individuals and groups from diverse populations both verbally and in writing.</p>		
Student		Date:	
Instructor			
			Total points awarded

The student, in accordance with the standards set forth by the ADA and the Dental Hygiene Program, has demonstrated the following criteria.		Total Points	Points Awarded
1	Thoroughly defined and discussed medical condition, the etiology, and occurrence of the condition	15	
2	Demonstrates effective interpersonal communication skills. Students were easy to hear and understand. Used good vocal projection and enunciation.	10	
3	Discussed oral manifestations of the condition or oral manifestations from use of medications for the condition.	15	
4	Discussed management of the patient before treatment, during treatment & after treatment including emergency management protocol for the condition	20	
5	Thoroughly discussed indications and contraindications for treatment	10	
6	PowerPoint Presentation was easily understood. No typographical errors and free from extraneous information.	10	
7	Test questions were appropriate and well explained. Supported the correct answer and discussed incorrect answers.	10	
9	All references used were current and within 5 years. Only one reference can be from the internet but must be a reputable source. (not Wiki, etc.)	10	
Total Points Possible		100	

**Comments:**

## RESEARCH PROJECT PRESENTATION CRITERIA

Each student worked on preparing and presenting a research project last spring in DHYG 2301/ Dental Hygiene Care I. Presentations were made to fellow classmates and to faculty. Grades were assigned to the research projects in DHYG 2301/ Dental Hygiene Care I and suggestions were made for improving the presentation.

In DHYG 2331, students are expected to have made the changes suggested to improve their presentations. Evidence of the changes must be turned in to the instructor by the due date published in the course calendar. This is part of the grade for the presentation.

This semester, students will be responsible for presenting their research project to local area Dental Hygienists. Judges from the audience will evaluate each presentation. Points will be tabulated and monetary awards will be given to the top three groups with the most points. Students have the opportunity to present their research project to the Student Chapter of the American Dental Hygienists Association Annual meeting.

The instructor for DHYG 2331 will use the evaluation form on the following page of this syllabus to assign a grade to each student for the research project presentation. This presentation will be 10% of the grade for DHYG 2331.

### **LIT Research Poster Presentation Criteria Fall**

The Research Poster Presentation is a presentation using oral communication and a professional electronic poster to inform, clarify, and/or review material on a specific topic. This presentation is a continuation of the presentation made during Spring semester. You will condense and refine the presentation to present as a continuing education seminar to local dental professionals in November.

#### **To prepare your electronic poster:**

1. Research your topic thoroughly and have reference documentation available.
2. Be prepared for any questions and discussion at the end of the presentation.
3. Be prepared to communicate the information clearly within the allotted time. Practice your presentation so that you can discuss the key points without reading directly from note cards.
4. Prepare your electronic poster presentation to effectively communicate and supplement what you are saying. Avoid using sensationalized comments or images. This presentation should be professional and based on sound science and qualified references.
5. Practice your presentation with friends and colleagues. Ask for constructive criticism.

#### **Content:**

**Purpose:** The purpose of the presentation is to present a technique, theory, service, trend or expanded opportunity in the practice of dental hygiene/dentistry or oral and systemic health.

**Scope and Depth:** The scope and depth of the presentation allows the topic to be presented comprehensively at a professional level.

**Current and Accurate:** The information presented needs to be current and accurately depicted.

**Organization:** The information is presented in a logical, interesting sequence the audience can easily follow.

**E-Poster, Text and Graphics:**

**Rules & Specs:** There will be only one (1) slide used during the presentation.

**Visual Appeal:** The e-poster/template exhibits the following:

- Visually appealing, grabs the observer's interest
- Appropriate photos and other images are included
- Easy to read and understand (avoid small print; use contrasting colors)
- Integrated into the presentation

**Text/Graphics:** Make sure there are no errors in spelling, grammar and punctuation. Information needs to be clear and concise. Do not contain any advertising material or commercial promotion. Drugs need to be identified by their **generic or chemical formula**.

**Oral Presentation:**

**Knowledge of Subject:** Presenters demonstrate an appropriate level of knowledge of the topic and progress smoothly through the presentation enhancing the material being presented.

**Questions:** The presenters answer questions during question-and-answer time if asked, providing accurate and complete explanations.

**Eye Contact:** The presenters maintain appropriate eye contact with the audience.

**Communication Skills:** The presenters use communication skills appropriate to the dental hygiene profession, including:

- Clear voice
- Correct, precise pronunciation of terms
- Limited use of disfluencies (ah, uhm, etc.)
- Correct use of the English language

**Dress Code:** Professional attire is worn. Uniforms and lab coats are acceptable. No jackets or sweatshirts while presenting.

**Time:** Electronic Poster Presentation is appropriate length; **not more than 7 minutes.**

**Additional Information:**

Send an electronic copy of your poster to Mrs. Cruz by due date on the course calendar.

Please keep the text on the electronic poster (slide) to a minimum.

## E-Portfolio

This semester there will be several journal entries to add to your E-Portfolio. These journal entries are meant to be a reflection on what you have learned through your clinical experiences, patient interactions, challenges or triumphs you have encountered and growth you have seen within yourself.

Please use proper grammar, spelling, and punctuation. Refrain from inappropriate language, derogatory comments, and non-clinical issues. You will submit 3 complete journal entries during the semester.

See Course Calendar and Blackboard for due dates. The following are to be included in your E-Portfolio this semester:

### Journal Entry #1

1. Did you feel prepared to come into 2<sup>nd</sup> year clinic?
2. What could you, as a student, have done differently to be better prepared for clinic?
3. Since the beginning of this semester, what differences have you seen in yourself in clinic?

### Journal Entry #2

1. At this point in the semester, where do you see that you have made the most improvement?
2. What have your challenges been so far and how have you been able to overcome them?
3. In what area do you feel that you have excelled in the clinical setting or what area do you feel that you still need to develop your skills?

### Journal Entry #3

1. Comparing where you ended the semester to when you started in August, where do you see the most growth in clinic?
2. Were there any moments when you had a patient interaction that was challenging or rewarding? Explain that moment.
3. What skill area do you feel that you positively developed the most this semester?

Also, this semester you will be adding your Community Service to your E-Portfolio (Bingman Fluoride Varnish program). Write a description of your community service hours for the Fall semester. Include where you volunteered, what you did for the organization, who you interacted with, and how long you volunteered. This should be included to your 1<sup>st</sup> year entries. Answer the following questions:

1. What did you discover about yourself while volunteering?
2. Reflect on how volunteering helps you grow as a professional.

The grading rubric can be seen in Blackboard in the submission area.