

Course discipline/number/title: DH 2530: Principles of Dental Hygiene III**A. CATALOG DESCRIPTION**

1. **Credits:** 3
2. **Hours/Week:** 2 lecture, 2 lab
3. **Prerequisites (Course discipline/number):** DH 1510, DH 1520
4. **Other requirements:** None
5. **MnTC Goals (if any):** NA

B. COURSE DESCRIPTION: This course is a continuation of Principles of Dental Hygiene II, with an emphasis on advanced dental hygiene skills and applied auxiliary skills. This course will familiarize the dental hygiene student with the properties and uses of various dental materials. The focus will be on composition, chemistry, and clinical application of commonly used materials in dentistry.

C. DATE LAST REVISED (Month, year): December, 2023

D. OUTLINE OF MAJOR CONTENT AREAS:

1. Nonsurgical Periodontal Therapy.
2. Evaluation and Decision Making Following Non-Surgical Periodontal Therapy.
3. Dentinal Hypersensitivity and Desensitization
4. Pit and Fissure Sealants, Evaluation for and Placement
5. Introduction to Dental Materials
6. Synthetic Dental Materials
7. Amalgam Restorative Material
8. Intermediary Materials and Dental Cements
9. Impressions Materials
10. Study Casts and Gypsum Materials
11. Vital Tooth Whitening
12. Cast Restorations/Gold and Non-precious Alloys
13. Isolation Devices and Gingival Displacement
14. Periodontal Dressing and Suture Removal

E. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Demonstrate advanced treatment planning for patients with different levels of periodontal disease involvement, to include active and maintenance therapies.
2. Demonstrate advanced instrumentation skills of periodontal debridement to include scaling, root planning and ultrasonic instrumentation.
3. Discuss indications for the various site-specific antimicrobials and antibiotics in periodontal therapy.
4. Demonstrate understanding of the prescription and documentation requirements regarding the placement of site specific antibiotics/antimicrobials.
5. Apply a site specific antibiotic in lab simulation.
6. Discuss the factors which contribute to dentinal hypersensitivity and methods available for treatment of this condition.
7. Identify physical and biological conditions which must be considered before using any material in dentistry.
8. Explain the uses, chemical structure, composition and property characteristics as well as the effects of technique variations on the properties of the materials discussed within the scope of this class.
9. Discuss the role of the Dental Hygienist in the application and maintenance of various dental materials.
10. Discuss the uses and types of synthetic resins used in dentistry.
11. Demonstrate assessment principles to determine the need for pit and fissure sealant placement.
12. Demonstrate the placement of pit and fissure sealants.
13. Outline the science of metals and their use in dentistry.
14. Discuss the structure, properties, and manipulation of dental amalgam.
15. Discuss the rationale for amalgam polishing and overhang removal.
16. Demonstrate the techniques for amalgam polishing of dental restorations.
17. Identify the uses and types of impression materials and digital techniques frequently used in dentistry.

- E. LEARNING OUTCOMES (GENERAL):** The student will be able to: **continued. . .**
18. Describe the dental casting procedure and computer aided crown fabrication.
 19. Demonstrate the technique for making an alginate impression.
 20. Demonstrate the techniques for assessment and therapy modalities to include dental impressions, dental retainers or trays and study casts.
 21. Discuss the characteristics and uses for gypsum products.
 22. Demonstrate pouring of a study model.
 23. Define tooth whitening and explain the difference between vital and non-vital tooth whitening.
 24. Counsel a student patient in vital tooth whitening.
 25. Discuss the uses and the need for gingival displacement and tissue retraction in dentistry.
 26. Demonstrate the placement of retraction cord for gingival displacement and tissue retraction in lab.
 27. Discuss the use of periodontal dressing, its placement and removal.
 28. Demonstrate suture removal in simulation.
- F. LEARNING OUTCOMES (MNTC):** NA
- G. METHODS FOR EVALUATION OF STUDENT LEARNING:** Methods may include but are not limited to:
1. Process Evaluations
 2. Quizzes
 3. Comprehensive Final Examination
 4. Class research assignments
- H. RCTC CORE OUTCOME(S).** This course contributes to meeting the following RCTC Core Outcome(s):
- Critical Thinking.** Students will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.
- Personal and Professional Accountability.** Students will take responsibility as active learners for achieving their educational and personal goals.
- I. SPECIAL INFORMATION (if any):** None