COURSE NO., HOURS AND TITLE:   DH 207-4  Instrumentation Techniques

COURSE DESCRIPTION:
Fundamentals of dental hygiene instrumentation and infection control are taught to prepare students for clinical hygiene practice. Laboratory fee: $35. Lecture two hours. Lab four hours. 16 weeks. Prerequisite: acceptance into the professional sequence.

PREREQUISITE TO: 220, 247

COURSE OBJECTIVES:
At the completion of the course, the student will be able to:

1. Demonstrate effective time management in daily lifestyle, in class preparation, and in lab.
2. Evaluate the clinical performances observed in junior clinic or Advanced Perio Clinic.
3. Demonstrate the proper communication skills (verbal and nonverbal) necessary to establish a desirable patient/operator respect and rapport.
4. Demonstrate the proper operation, care and maintenance of various dental equipment used by the dental hygienist.
5. Disinfect and prepare the dental unit and operating area for the dental hygiene appointment.
6. Explain the various infection control concerns and challenges present in the dental office and in clinic.
7. Utilize effective infection control for the various dental hygiene procedures.
8. Explain and demonstrate proper instrument preparation prior to sterilization.
9. Explain and demonstrate proper vibraclean operation while preparing instruments for sterilization.
10. Explain and demonstrate proper magnaclave (autoclave) operation for instrument sterilization.
11. Explain the rationale for and demonstrate the use of appropriate personal protective equipment for various dental hygiene procedures.
12. Explain the rationale for standard precautions and demonstrate appropriately on each lab partner.
13. Explain appropriate exposure control protocol.
14. Explain the steps involved in retrieving new and/or sterile supplies without breaking the aseptic chain.

15. Demonstrate various hand exercises prescribed to develop manual dexterity and strength.

16. Evaluate the design features of dental instruments and differentiate between the various groups in instruments.

17. Select the appropriate instruments, and correct instrument end to perform a given task.

18. Explain the purpose of the modified pen grasp and the function of each finger in the grasp.

19. Demonstrate the modified pen grasp while utilizing dental instruments.

20. Explain the function and purpose of the fulcrum.

21. Demonstrate an acceptable fulcrum for all areas of the mouth when utilizing each dental instrument.

22. Explain the role the mouth mirror plays in effective instrumentation.

23. Demonstrate the proper uses of the mouth mirror, including illumination, transillumination, indirect vision, retraction, and protection.

24. Explain the role of ergonomics in dental hygiene care and utilize proper hand and body positions and movements to promote physical well-being and time efficiency.

25. Explain the role that proper patient, light, and operator positioning play in quality dental hygiene care and in maintaining operator health.


27. Explain the principles of activation and adaptation.

28. Demonstrate correct activation and adaptation while utilizing dental instruments.

29. Compare and explain the old paradigm of scaling and root planing to the new paradigm of periodontal debridement.

30. Explain the significance of periodontal probing.

31. Recognize and demonstrate the proper use of the various periodontal probes.

32. Demonstrate the proper use of instruments (probe/dull explorer) and air in caries detection.

33. Demonstrate proper use of explorers in assessing tooth structure and in locating deposits.

34. Explain the proper use of scaling instruments in the removal of deposits.
35. Demonstrate the proper use of all instruments in your kit on mannequins and on lab partners.

36. Evaluate the sharpness of instruments and demonstrate proper and effective honing technique.

37. Explain the concept of selective polishing.

38. Demonstrate effective extrinsic stain removal with a rubber cup and slow speed handpiece.

39. Demonstrate appropriate technique in applying disclosant solution and calculating a plaque-free score.

40. Describe the dental hygiene process of care in the context of assess, diagnose, plan, implement, and evaluate (ADPIE).

41. Analyze and synthesize data using clinical judgment and critical thinking skills to formulate a dental hygiene diagnosis.

42. Apply an evidence-based approach to develop a dental hygiene care plan and appointment sequence.

43. Videotape on smart phone to record own clinical performance for the purpose of self-evaluation.

44. Demonstrate proper basic life support as learned outside of class in a CPR class.

45. Perform the basic clinic assistant duties with guidance from clinical faculty.

**TOPICAL OUTLINE:**

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<tr>
<th>Topics</th>
<th>Percentages</th>
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<tbody>
<tr>
<td>I. Infection Control</td>
<td>10%</td>
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<tr>
<td>II. Instrument Design and Classification of Hand Instruments</td>
<td>10%</td>
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<tr>
<td>III. Fundamental Skills (Modified Pen Grasp, Fulcrums, Positioning Mouth Mirror Usage, Adaptation and Activation)</td>
<td>30%</td>
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<tr>
<td>IV. Instrumentation with Explorers, Probes, Sickles, Curets and Mouth Mirror</td>
<td>30%</td>
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<tr>
<td>V. Ultrasonic Scalers</td>
<td>5%</td>
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<td>VI. Air Abrasive Polisher</td>
<td>5%</td>
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VII. Mechanical Polisher 5%

VIII. Instrument Sharpening 5%

TEXTBOOKS:

Required:

