COMMON COURSE OUTLINE: DENH 2263 Pain Management

A. Course Description
   1. Credits: 2
   2. Hours/Week: Lecture 1 hour; Lab/clinic 2 hours
   3. Prerequisites (Course discipline/number): Acceptance in Dental Hygiene Program; In the process of developing competence in clinical dental hygiene care; DENH 1110, 1142, 1162, BIOL 1142
   4. Co-requisites (Course discipline/number): NA
   5. MnTC Goals (if any): Goal 2: Critical Thinking

Preparation of the dental hygiene student in effective and safe administration of local anesthesia and nitrous oxide-oxygen inhalation sedation.

B. Date Last Revised (Month, year): January, 2014

C. Outline of Major Content Areas
   1. Anxiety and Pain Control in Dentistry
   2. Head and Neck Anatomy Review
   3. Armamentarium
   4. Pharmacology of Topical and Local Anesthetics
   5. Client Evaluation
   6. Calculation of Local Anesthetic Dosages
   7. Oraqix Application
   8. Basic Injection Technique
   9. Technique: Supraperiosteal Injection, ASA, MSA, PSA, Infraorbital, Palatal Injections, IA/L, Buccal, Mental/Incisive, IO, GG, Intraseptal, PDL
   10. Introduction to the Wand/CompuDent and Pressure Syringe
   11. Local and Systemic Complications Involving Local Anesthesia
   12. Professionalism, Treatment Planning and Record Keeping Related to Pain Management
   13. Overview of Nitrous Oxide – Oxygen Inhalation Sedation
   14. Stages/Levels of Anesthesia
   15. History of Nitrous Oxide-Oxygen Inhalation Sedation
   16. Pharmacology, Chemistry and Physiology of Nitrous Oxide-Oxygen Inhalation Sedation
   17. Signs and Symptoms
18. Equipment, Safety Measures, Infection Control
19. Technique of Administration
20. Indications for Use, Contraindications
21. Complications and Management
22. Advantages and Disadvantages
23. Chronic Exposure and Nitrous Oxide Abuse
24. Legal and Ethical Issues Related to Pain Management

D. LEARNING OUTCOMES (GENERAL)
Upon successful completion of the course, the student will be able to:

1. Discuss anxiety and pain control in Dentistry.
2. Discuss the pharmacodynamics of topical and local anesthesia.
3. Assess each client’s health history to determine suitability to receive local anesthetics and vasoconstrictors.
4. Calculate safe local anesthetic dosages.
5. Relate basic head and neck anatomy to clinical application of local anesthesia.
6. Demonstrate proper assemble, dissemble and maintenance of local anesthesia armamentarium.
7. Administer a safe, comfortable, and effective injection for control and elimination of pain. Specific injections to include: Supraperiosteal Injection, Anterior Superior Alveolar, Middle Superior Alveolar, Posterior Superior Alveolar, Greater Palatine, Nasopalatine, Inferior Alveolar/Lingual, Incisive/Mental, Buccal.
8. Describe the Infraorbital Nerve Block and the Gow-Gates Mandibular Nerve Block, Periodontal Ligament Injection (PDL), and Intraseptal injection.
9. Administer the PDL and Intraseptal injections on a simulation model utilizing the Wand/CompuDent and/or a pressure syringe.
10. Administer Oraqix in a safe and effective manner on the appropriate client(s).
11. Prepare an appropriate client treatment plan with regard to local anesthesia and/or nitrous oxide oxygen sedation and dental hygiene care.
13. Integrate professional, legal and ethical concerns with the practice of pain control.
14. Discuss local and systemic complications that may result from the administration of anesthetic agents and the proper management of these complications.
15. Discuss the concept of nitrous oxide-oxygen inhalation sedation.
16. Assess levels of sedation.
17. Understand the pharmacology and chemistry of nitrous oxide-oxygen inhalation sedation.
18. Relate the understanding of human anatomy and physiology to the application of nitrous oxide oxygen inhalation sedation.
19. Discuss the indications and contraindications for use of nitrous oxide-oxygen inhalation sedation.

20. Recognize signs and symptoms that indicate obtaining a client’s baseline level of nitrous oxide oxygen sedation.

21. Demonstrate proper handling of nitrous oxide-oxygen sedation equipment, respecting environmental hygiene and safety.

22. Administer nitrous oxide-oxygen sedation to the dental client in a safe and effective manner.

23. Discuss the advantages and disadvantages of inhalation sedation with nitrous oxide-oxygen.

24. Discuss prevention, recognition, and management of complications associated with nitrous oxide.

25. Discuss chronic exposure and nitrous oxide-oxygen abuse.

E. Methods for Assessing Student Learning
   1. Lab/clinical skill performances
   2. Review worksheets
   3. Written exams
   4. Practical exams

F. Special Information None