

Prepared by the Department of Health Sciences

Date of Departmental Approval: January 18, 2018

Date approved by Curriculum and Programs: February 28, 2018

Effective: Fall 2018

1. **Course Number:** DEN 237
Course Title: Pain Management in Dental Hygiene Practice

2. **Description:** This course is intended to provide a comprehensive study of local dental anesthetics in the dental hygiene profession. Utilizing lecture and lab components, the student will learn to safely administer topical and local dental anesthetics. This course covers Massachusetts Rules and Regulations 234 CMR 3.09-3.14, and its requirements in the administration of local dental anesthetics.

3. **Student Learning Outcomes:** At the completion of this course the dental hygiene student will have the following knowledge and skills as they relate to the profession of dental hygiene process of care.
 - Demonstrate the ability to read, listen, interpret, and communicate through appropriate spoken or written forms of Standard English.
 - Demonstrate ability to recognize and critically examine attitudes and values expressed by others in oral and written form.
 - Provide necessary information to recognize pain and/or anxiety associated with dental treatment.
 - Discuss the causes problems/symptoms, prevention and management of the locally occurring complications associated with the administration of local anesthetic drugs.
 - Identify the types of pain control available to the patient and perform those legally acceptable in the state.
 - Discuss the rationale of using an aspiration syringe.
 - Give examples of different types of local anesthetics and vasoconstrictors. Determine how they should be appropriately utilized during dental hygiene treatment.
 - Recognize medical and dental conditions that would influence the selection of a local anesthetic agent.
 - Classify a patient according to the American Society of Anesthesiologists (ASA) Physical Evaluation System.
 - Identify the problems/symptoms, prevention and management of the locally occurring complications associated with the administration of local anesthetic drugs.
 - Practice ethical and legal behavior during their professional life.
 - Apply the appropriate pain control for their patients.
 - Administer local anesthesia successfully.
 - Adhere to established standards and administer local anesthesia safely.
 - Communicate to their patients the physical effects of local anesthesia.
 - Calculate the maximum safe dosage of local anesthetic and vasoconstrictors to be administered for a specific patient.
 - Identify the problems/symptoms, prevention and management of the locally occurring complications associated with the administration of local anesthetic drugs.

4. **Credits:** 2

5. **Satisfies General Education Requirements:** No.

6. **Prerequisites:** DEN 123 (Dental Hygiene II) and DEN 128 (Clinical Dental Hygiene II)

7. **Semester(s) Offered:** Fall

8. **Suggested General Guidelines for Evaluation:** Students are evaluated utilizing announces quizzes, a mid-term exam, a final exam, clinical competencies, and graded group case study and presentation. Students need to achieve a grade of C (75) or better to successfully complete the course.

9. General Topical Outline (Optional):

Week 1: Pain characteristics and management; armamentarium in local anesthesia

Week 2: Neurophysiology, properties of local anesthetics; basic injections techniques

Week 3: Record keeping and legal issues; Anatomical considerations for infiltration techniques; MSA landmarks and injection

Week 4: Trigeminal nerve and associated structures; ASA landmarks and injection

Week 5: Trigeminal nerve (Cont); PSA landmarks and injection

Week 6: Clinical action of specific agents: the pharmacology of topical and local anesthetics; Review PSA Injection; Greater Palatine and Nasopalatine injection landmarks

Week 7: Local anesthetics and vasoconstrictors; Greater Palatine and Nasopalatine injections

Week 8: Medical history and treatment planning; review and perform all maxillary injections; locate landmarks for mandibular Inferior Alveolar Block (IA), and Lingual Block injection

Week 9: Local complications; mandibular nerve block anesthesia; review landmarks and injection techniques or mandibular Inferior Alveolar Block (IA) and Lingual Block; locate landmarks for Long Buccal injection

Week 10: Systemic complications; review landmarks and perform Long Buccal injection; review Mental Nerve Block (MB) and Incisive Nerve Block (IB)

Week 11: Alternative anesthesia; Incisive Nerve Block (IB) and Mental Nerve Block (MB) injections

Week 12: Topical Anesthesia; pediatric and periodontal anesthesia

Week 13: Case Study Research Paper and Presentation

Week 14: Clinical Review/ Clinical Practicum Final (Half mouth anesthesia: ASA, MSA, PSA, GP, NP, IA, L, LB, MB, IB)