

Course discipline/number/title: DA 1270: Expanded Functions II**A. CATALOG DESCRIPTION**

1. **Credits:** 1
2. **Hours/Week:** Delivered in two full days, plus an additional two hours for a final exam
3. **Prerequisites (Course discipline/number):** DA 1225
4. **Other requirements:**
5. **MnTC Goals (if any):** NA

B. COURSE DESCRIPTION: Expanded Functions II will provide the remainder of the required instruction in Minnesota Expanded Functions required to become a Minnesota Licensed dental assistant. This nitrous oxide-oxygen inhalation sedation course covers the theory and pre-clinical/clinical experiences required by the Minnesota Board of Dentistry to administer and monitor nitrous oxide inhalation sedation.

C. DATE LAST REVISED (Month, year): September, 2021

D. OUTLINE OF MAJOR CONTENT AREAS:

1. Laws and regulation of Nitrous Oxide-Oxygen Inhalation Sedation
2. Definitions/Terminology
3. Purpose / Use
4. Monitory and Administration Techniques.
5. Advantages / Disadvantages for Use
6. Indications / Contraindications for Use
7. Properties and Pharmacokinetics of Nitrous Oxide-Oxygen Inhalation Sedation
8. Anatomy & Physiology of Respiration
9. Inhalation Sedation Equipment Design and Use
10. Titration of Nitrous Oxide-Oxygen Gases
11. Record Keeping for Nitrous Oxide-Oxygen Inhalation Sedation
12. Potential Inhalation Complications

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

1. Define the terms related to nitrous oxide-oxygen sedation/analgesia.
2. State the laws in Minnesota regulating the administration and monitoring of nitrous oxide- oxygen sedation/analgesia.
3. Explain the dental purposes for the use of nitrous oxide-oxygen sedation/analgesia.
4. Describe the stages/planes of anesthesia and patient responses.
5. Describe the physiological effects of nitrous oxide-oxygen sedation/analgesia.
6. List the indications and contraindications for the use of nitrous oxide-oxygen sedation/analgesia.
7. Compare nitrous oxide-oxygen sedation/relative analgesia to other methods of pain control and sedation.
8. Describe correct patient assessment for the use of nitrous oxide-oxygen sedation/analgesia.
9. Describe the physical properties and pharmacokinetics of nitrous oxide and interactions with body systems.
10. Describe anatomy and physiology of respiration
11. Describe analgesia equipment design, function and follow correct titration technique for administration.
12. List and describe the steps for administering nitrous oxide-oxygen sedation/analgesia.
13. Describe/identify the signs and symptoms of nitrous oxide-oxygen sedation/analgesia.
14. Describe the recovery considerations of nitrous oxide-oxygen sedation/analgesia.
15. Recognize the abuse potential of nitrous oxide and potential biohazards for health personnel with chronic exposure to N₂O.
16. Demonstrate competency in administering and managing nitrous oxide-oxygen inhalation sedation/analgesia for a minimum of three supervised cases in a supervised clinical setting.
17. Correctly complete the recordkeeping/chart notations for a minimum of three supervised cases of nitrous oxide-oxygen sedation/analgesia.

F. LEARNING OUTCOMES (MNTC): NA

- G. METHODS FOR EVALUATION OF STUDENT LEARNING:** Methods may include but are not limited to:
1. 3 Skill Evaluations for Administering Nitrous Oxide-Oxygen Sedation
 2. 3 Skill Evaluations for Monitoring Nitrous Oxide-Oxygen Sedation
 3. Comprehensive Final Exam
- H. RCTC CORE OUTCOME(S).** This course contributes to the following RCTC Core Outcome(s):
Communication. Students will communicate appropriately for their respective audiences.
- I. SPECIAL INFORMATION (if any):**
1. Attendance for all course hours.
 2. RCTC Approved uniform attire, safety glasses, and nametag.
 3. Current Certification in American Red Cross or American Heart Association BLS (Basic Life Support) for the Healthcare Provider (CPR/AED)
 4. Approved state background study
 5. Approved health assessment
 6. Hepatitis B Vaccine
 7. Compliance with Dental Infection Control Protocols and Hazard Management Protocols.