Faculty is required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

**DEPT:** Dental Assisting  
**COURSE NUMBER:** 1185

**NUMBER OF CREDITS:** 1

**COURSE TITLE:** Nitrous Oxide Inhalation Administration

**CATALOG DESCRIPTION:**

This course will provide the student with skills and knowledge needed for safe and effective administration of nitrous oxide inhalation analgesia and the management of associated complications. The course will provide a minimum of 12 hours of didactic and supervised clinical experiences as required by the Minnesota Board of Dentistry. During the clinical portion of the class, students will administer and undergo nitrous oxide/oxygen sedation as a patient. Student must be certified in CPR before taking this course.

**AUDIENCE:** Spring Dental Assisting Students/Customized Training Students

**FULFILLS MN TRANSFER CURRICULUM AREA(S) (Leave blank if not applicable)**

Area: by meeting the following competencies:
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**PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE:** Enrolled dental assisting or customized training student. Student has a current CPR card.

**LENGTH OF COURSE:** 12 hours

**THIS COURSE IS USUALLY OFFERED:**

Every other year [ ] fall [ ] spring [x] summer [ ] undetermined [ ]

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) **ACADEMIC CONTENT:** The academic objectives of this course are:
   1. Explain the Minnesota Board of Dentistry rules regarding nitrous oxide inhalation analgesia and local anesthesia.
   2. Explain how to utilize nitrous oxide inhalation analgesia for anxiety and pain management.
   3. Describe the advantages and disadvantages of nitrous oxide-oxygen administration.
4. Identify the stages of anesthesia.
5. Describe the pharmacology/chemistry/physiology of nitrous oxide.
6. List the indications and contraindications to nitrous oxide inhalation analgesia administration.
7. Assemble a nitrous oxide unit.
8. Explain the administration technique of nitrous oxide-oxygen use.
9. Identify the safety factors associated with nitrous oxide-oxygen equipment.
11. Utilize infection control as it relates to nitrous oxide-oxygen inhalation analgesia.
13. Describe environmental hygiene as it relates to nitrous oxide use.
15. Describe the anatomy of the respiratory system.
16. List the characteristics of nitrous oxide.
17. Evaluate signs and symptoms of nitrous oxide-oxygen sedation.
18. Describe what is meant by positive pressure technique.
19. Explain nitrous oxide abuse/chemical dependency.
20. Explain the need for liability insurance as it relates to nitrous oxide-oxygen administration.

2) THINKING SKILLS: This course will help students improve the effectiveness of their thinking skills through:

1. Lecture
2. Testing
3. Individual project
4. Reading selected materials
5. Class participation

3) COMMUNICATIONS SKILLS: This course will help students improve their oral and written communication skills through:

1. Written assignments
2. Oral participation in classroom

4) HUMAN DIVERSITY: This course will help students recognize, understand, and appreciate human diversity through:

1. Recognizing that nitrous/oxide administration is not dependent on the diversity of individual patients.

TOPICS TO BE COVERED:

Nitrous/Oxide administration

LIST OF EXPECTED COURSE OUTCOMES:
Students will be able to safely and successfully administer and understand the physiology and didactic knowledge to accomplish administration.

LEARNING/TEACHING TECHNIQUES used in the course are:
- Collaborative Learning
- Problem Solving
- Student Presentations
- Interactive Lectures
- Creative Projects
- Individual Coaching
- Lecture
- Films/Videos/Slides
- Demonstrations
- Other (describe below)
- Lab

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:
- Reading
- Tests
- Individual Projects
- Oral Presentations
- Worksheets
- Collaborative Projects
- Textbook Problems
- Papers
- Portfolio
- Group Problems
- Term Paper
- Other (describe below)

EXPECTED STUDENT LEARNING OUTCOMES:

Students will be able to safely and successfully administer and understand the physiology and didactic knowledge to accomplish administration.

"This course will cover the characteristics of hazardous wastes and its safe handling, storage, and disposal."

Students are expected to be able to perform two handed clinical and lab procedures which require sitting on a dental assisting stool for relatively long periods. Vision and hearing impairments may limit the ability to perform actual aspects of dental assisting.

Questions regarding physical disabilities should be referred to the program director.

The information in this course outline is subject to revision

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

This document is available in alternative formats to individuals with disabilities by contacting the Student Services Advisor or by calling 800-658-2330 or Minnesota Relay Service at 800-627-3529 or by using your preferred relay service.

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