

**DH 78 Course Outline as of Fall 2011****CATALOG INFORMATION**

Dept and Nbr: DH 78 Title: LOCAL ANESTHESIA  
 Full Title: Local Anesthesia/Nitrous Oxide Conscious Sedation  
 Last Reviewed: 2/7/2022

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.00	Lecture Scheduled	0.75	17.5	Lecture Scheduled	13.13
Minimum	1.00	Lab Scheduled	1.50	6	Lab Scheduled	26.25
		Contact DHR	0		Contact DHR	0
		Contact Total	2.25		Contact Total	39.38
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 26.25

Total Student Learning Hours: 65.63

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

A course covering the techniques of pain control by the administration of local anesthetics and nitrous oxide/conscious sedation. The course will prepare the student for management of the more complex clinical client during advanced dental hygiene care procedures.

**Prerequisites/Corequisites:**

Course Completion of DH 74 and DH 75

**Recommended Preparation:****Limits on Enrollment:**

Acceptance into Allied Dental Program

**Schedule of Classes Information:**

Description: A course covering the techniques of pain control by the administration of local anesthetics and nitrous oxide/conscious sedation. The course will prepare the student for management of the more complex clinical client during advanced dental hygiene care procedures. (Grade Only)

Prerequisites/Corequisites: Course Completion of DH 74 and DH 75

Recommended:

Limits on Enrollment: Acceptance into Allied Dental Program

Transfer Credit: CSU;

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:

<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
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<b>CSU Transfer:</b>	Transferable	Effective:	Summer 2000	Inactive:
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<b>UC Transfer:</b>	Effective:	Inactive:
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**CID:**

**Certificate/Major Applicable:**

Major Applicable Course

## **COURSE CONTENT**

### **Outcomes and Objectives:**

Upon completion of this course, the student will be able to

1. Explain various strategies for reducing apprehension and fear.
2. Assess the patient's need for pain control procedures according to protocol.
3. Assess the patient's vital signs.
4. Perform the proper chart documentation of pain control choices, including informed consent.
5. Describe the nerve conduction process.
6. Describe the anesthetic agents and vasoconstrictors used in dentistry, and discuss the rationale for choosing certain agents.
7. Assess the medical history of the patient to determine the correct local anesthetic (LA) agent; if contraindicated, be able to recommend an appropriate modification.
8. Successfully assemble the armamentarium associated with Oraqix anesthetic.
9. Demonstrate the use of Oraqix anesthetic on a typodont.
10. Identify all anatomical landmarks associated with LA injections.
11. Identify the nerve, teeth, and soft tissue structures that are anesthetized with all injections.
12. Successfully assemble, disassemble and maintain the Computer Controlled Anesthetic Delivery System (CCADS).
13. Using best practices deliver anesthesia utilizing LA and CCADS.
14. Identify the local complications that could result from the administration of LA and how to properly manage these complications.
15. Recognize and assist in the management of any systemic complications that may result from the administration of LA.
16. Discuss history of nitrous oxide use and its association with the dental profession.
17. Utilize best practices for the delivery of nitrous oxide administration.

### **Topics and Scope:**

- A. Clinical procedures
  1. Medical histories

2. Emergency management-Cardio Pulmonary Resuscitation (CPR) review
3. Infection control
4. Patient assessments
  - a. Rationale for specific agents
  - b. Modifications
5. Patient management techniques
6. Documentation
7. Best practices for LA, nitrous oxide sedation, CCADS

B. Armamentarium

1. Cartridge
2. Needle
3. Preparation of armamentarium
4. Break-down and disposal of armamentarium

C. Anesthesia

1. Local anesthetics
  - a. Pharmacology
  - b. Independent agent
  - c. Technique
  - d. Calculate maximum safe dose
  - e. Complications
  - f. Rationale for use of specific agents
  - g. Nerve conduction process

2. CCADS

- a. Armamentarium
  - b. Complications
3. Topical anesthetics
    - a. Oraqix
    - b. Complications
  4. Administration of LA injections
    1. Supraperiosteal/local infiltration
    2. Anterior middle superior alveolar nerve block
    3. Posterior superior alveolar nerve block
    4. Infraorbital nerve block
    5. Greater palatine nerve block
    6. Nasopalatine nerve block
    7. Inferior alveolar nerve block
    8. Lingual nerve block
    9. Long buccal nerve block
    10. Mental nerve block
    11. Incisive nerve block

D. Anatomic review of oro-facial structures

E. Identification of anatomical landmarks associated with LA injections:

1. Supraperiosteal/local infiltration
2. Anterior middle superior alveolar nerve block
3. Posterior superior alveolar nerve block
4. Infraorbital nerve block
5. Greater palatine nerve block
6. Nasopalatine nerve block
7. Inferior alveolar nerve block
8. Lingual nerve block
9. Long buccal nerve block
10. Mental nerve block

11. Incisive nerve block
12. Teeth, soft tissues and nerves anesthetized in local anesthesia injections
  - a. Maxillary arch
  - b. Mandibular arch
- F. Local anesthetic administration techniques of mandibular and maxillary injections
- G. Nitrous oxide conscious sedation
  1. History
  2. Physiology
  3. Pharmacology
  4. Indications/contraindications
  5. Advantages/disadvantages
  6. Equipment
  7. Scavenger systems
  8. Hazards to personnel
  9. Tidal volume
  10. Technique for administration
  11. Determining and monitoring levels of gases
  12. Oxygenation at end of procedure
  13. Management of complications

### Assignment:

1. Lecture
  - a. participation in class discussion
  - b. 4-6 quizzes
  - c. 2 exams
2. Lab competencies check-off
  - a. administration of local anesthesia (LA) on student partner
  - b. assembly and disassembly of syringe
  - c. assembly and disassembly of nitrous oxide equipment
  - d. administration of nitrous oxide to a fellow classmate
  - e. one exam

### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because skill demonstrations are more appropriate for this course.

Writing  
0 - 0%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

None

Problem solving  
0 - 0%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Lab competencies

Skill Demonstrations  
45 - 60%

**Exams:** All forms of formal testing, other than skill performance exams.

Lecture quizzes, exams; lab exam

Exams  
25 - 40%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Participation in class discussion

Other Category  
10 - 15%

### **Representative Textbooks and Materials:**

Local Anesthesia for Dental Professionals, Bassett K., 2010

Lexi-Comp's Drug Information Handbook for Dentistry, Wynn, R., 2010, 16th Ed.

Drug information handbook for Dentistry, Wynn R. L., 2010

(Recommended) Local Anesthesia Administration, DVD, Malamed, S., 2005 (Classic)