

Course Information

Course Number:	DDHS 4810 500
Course Title:	Local Anesthesia and Nitrous Oxide Conscious Sedation
Section:	500
Time:	Fall 2023, Fridays 8-9am, Labs TBD
Location:	Room 6
Credit Hours:	1 BS

Instructor Details

Instructor:	Steven Bender DDS (Course Director)
Office:	3000 Gaston Ave, 164E
Phone:	214-828-8299
E-Mail:	benderdds@tamu.edu
Office Hours:	Email for appointment

Course Description

This course consists of didactic and laboratory components and is designed to prepare the student to administer/monitor local anesthesia and nitrous oxide inhalation sedation to patients for pain management during dental treatment. Lecture instruction includes the basic principles of local anesthetics and nitrous oxide/oxygen inhalation sedation, patient pre-evaluation, injection techniques, and recognition of adverse patient reactions. The laboratory component includes the administrations of local anesthesia and nitrous oxide/oxygen to laboratory partners.

Course Prerequisites

Successful matriculation into the DH2 year

Special Course Designation

DH Bachelor of Science

Course Learning Outcomes

Course Objectives:

At the completion of this course the student should be able to:

1. Discuss the historical development of local anesthesia and the modern implication of local anesthesia in dental practice.
2. Identify the armamentarium used in local anesthesia procedures.

3. Discuss the basic terminology used in dentistry to describe injection techniques and responses to local anesthetic injections.
4. Discuss the fundamental anatomy, physiology and pharmacology involved in the skillful administration of local anesthetics.
5. Describe the foundational information necessary to becoming competent in the evaluation of the psychological and physical status of the patient before, during and after the administration of local anesthesia.
6. Develop an understanding for the need for adjustment of local anesthetic and vasoconstrictor doses for healthy and medically compromised patients.
7. Appreciate the foundational information necessary to develop competency in the prevention, recognition and initial management procedures to the adverse effects of local anesthetics or complications following local anesthetic administration.
8. Describe, the fundamental techniques to develop competency required for the administration of both mandibular and maxillary local anesthetics.
9. Demonstrate competency of administration of mandibular and maxillary local anesthetics in the clinical lab.
10. Recognize local anesthetic failures and corrective measures.
11. Articulate the foundational information necessary for the maintenance of proper records with accurate entries to reflect any medical, drug or complications associated with local anesthetic administration.

Related Institutional Competencies:

Dental Hygiene Student:

- 1.2 Comply with state and federal laws governing the practice of dentistry and dental hygiene.
- 2.1 Apply critical thinking skills and evidence-based decision making to the practice of dental hygiene
- 3.3 Contribute to the knowledge base of dental hygiene.
- 6.1 Determine medical conditions that require special precautions or consideration prior to or during dental hygiene treatment.
- 6.2 Perform an extraoral and intraoral examination of the patient including assessment of vital signs and radiographic examination and distinguish normal from abnormal findings.
- 6.3 Manage the patient at risk for a medical emergency and be prepared to handle the emergency should it occur during and appointment.
- 6.4 Recognize predisposing, etiologic risk factors, and life-style choices that may require intervention to prevent disease.
- 6.6 Determine the need for referral to the appropriate health professional.

Textbook and/or Resource Materials

Handbook of Local Anesthesia by Malamed, SF, 7th edition (Elsevier)

Handbook of Nitrous Oxide and Oxygen Sedation by Morris Clark and Ann Brunick, 5th edition (Elsevier)

Learning materials and recordings posted to Canvas

Grading Policy

Grade Scale

A = 100-90%
B = <90-80%
C = <80-75%
D = <75-70%
F = <70-0%

Exam I	30%
Exam II	30%
Exam III	30%
Hands-on lab	10%
	100%
Passing Grade:	75%

There will be 3 examinations covering all course material, including any assigned reading materials. If you miss any examination, you must schedule a make-up examination with Dr. Bender. The make-up examination style will be at the discretion of Dr. Bender and may include a written essay or oral presentation. The Final Course grade will be a weighted compilation of the 3 examinations plus successful completion of the mandatory labs. Student performance is evaluated by objective examination with an average score of 75% required for satisfactory achievement.

Attendance Policy:

We believe that diligent attendance in lectures is a sign of responsible professionalism and prepares the student for the rigorous demands of a successful career in dental hygiene practice. You may sit in any seat unless otherwise advised by the Course Director.

Participation is mandatory for the Local Anesthesia and Nitrous Oxide hands-on labs. If missing labs is due to an excused absence, an INCOMPLETE may be given for the course and will be rectified in the subsequent term. If the labs are missed for non-excused reasons the student will receive a failure for the course.

Laboratory/Clinic Policies and Procedures:

Mandatory participation in local anesthetics lab.

Late Work Policy

Due to the important nature of the contents of this course to patient safety and clinical practice, Remediation will be offered at the discretion of the course director. Laboratory attendance is mandatory.

Remediation Policy:

Students making less than the required grade of 75 must remediate the course as described below. Once the Student Promotion Committee has approved remediation, the student may remediate the class content by the following procedure:

In-House Remediation Procedure in the following semester:

The following are the steps involved for remediation:

1. The student must inform the course director of his/her intent and discuss the duration and schedule for remediation.
2. The student must complete a Remediation Exercise to be discussed with the course director at the first official meeting.
3. Additional handouts may be provided to the student, which he/she needs to go through before he/she comes to discuss each topic.
4. Students are required to meet with the course director for a minimum of 3 (three) times during the semester of remediation.
3. There will be one remediation exam. Requirement to pass remediation Exam: The student must secure a score of 75% or higher to pass remediation. The failed exam will be recorded as a grade of 75 and the failed exam score will be changed to a C grade

Remediation may include any or all of the following elements:

1. Reading from textbooks or journals available in the BUMC Medical Library.
2. Periodic review sessions with the Course Director or a designee.
3. Oral quizzes or questioning, which may be graded.
4. Review of handouts from the previous semester.
5. Weekly quizzes, covering the course's material.
6. The remediation must be passed with a cumulative score of 75 or better.

Course Schedule

This schedule is subject to change during the semester. Rooms TBD.

Date	Session Title/Topic	Instructor(s) L. Name
Week 1 Aug 18	Introduction to Local Anesthesia in Dental Practice	Dr. Steven Bender
Week 2 Aug 25	No Class	
Week 3 Sept 1	Local Anesthesia Armamentarium	Dr. Steven Bender
Week 4 Sept 8	The Physical Evaluation	Dr. Steven Bender
Week 5 Sept 15	Techniques of Administration: Maxillary	Dr. Steven Bender
Week 6 Sept 22	EXAM I ExamSoft	Dr. Steven Bender
Week 7 Sept 29	Techniques of Administration, Mandibular	Dr. Steven Bender
Week 8 Oct 6	Local Complications	Dr. Steven Bender
Week 9 Oct 13	No Class	
Week 10 Oct 20	Systemic Complications	Dr. Steven Bender
Week 11 Oct 27	Recent Advances/Specialty Considerations	Dr Steven Bender

Date	Session Title/Topic	Instructor(s) L. Name
Week 12 Nov 3	Exam II Examssoft	Dr. Steven Bender
Week 13 Nov 10	Nitrous1&2	Dr Steven Bender
Week 14 Nov 17	No Class	
Week 15 Nov 24	Fall Break: No Class	
Week 16 Dec1	Final EXAM ExamSoft	Dr Steven Bender
		Dr Steven Bender
TBD	Local Anesthesia hands-on labs and Nitrous Oxide labs – times TBD pending clinic and faculty availability	Dr. Steven Bender, Marianela Gonzalez

Optional Course Information Items

Technology Support

Students are responsible for maintaining their devices and ensuring that they are in proper working order throughout the semester. This includes maintaining access to the college wireless network, access to all accounts (both TAMU and TAMU Health) and keeping passwords up to date. Students are expected to keep their devices up to date in regard to patches and OS updates.

Division of IT

If the student experiences issues with an electronic device, wifi access, axiUm, Zoom, or user accounts, their first point of contact should be the Division of IT Central Help Desk or the local Division of IT at COD. The Central Helpdesk provides 24-hour support.

Division of IT Central Help Desk Website: https://it.tamu.edu/help/ Phone: 1-979-845-8300 Email: helpdesk@tamu.edu	COD Local Division of IT Office Room: 519 Phone: 214-828-8248
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COD Instructional Design Team

For electronic exam support or problems concerning other academic technology, such as the LMS (Canvas), ExamSoft, or Examplify, students should contact the Instructional Design team.

Room: 516 through Academic Affairs

Carmina Castro

ccastro@tamu.edu

(214) 828-8316

Jeff Lowry

lowryj1@tamu.edu

(214) 828-8243

Canvas support 24-hours

(877) 354-4821

Lecture Recordings and Mediasite Support

Lecture recordings are posted to the Mediasite course catalog typically no more than 24 hours after they have been received. Unless otherwise specified, all course recordings are available via the Mediasite channel link within the Canvas course.

For missing recordings, contact your instructor and the Instructional Design Team.

For problems with recording playback, Mediasite access, or performance, contact IT's Health Technology Care Team (979.436.0250).

University Policies

Attendance Policy

The university views class attendance and participation as an individual student responsibility. Students are expected to attend class and to complete all assignments.

Please refer to [Student Rule 7](#) in its entirety for information about excused absences, including definitions, and related documentation and timelines.

Makeup Work Policy

Students will be excused from attending class on the day of a graded activity or when attendance contributes to a student's grade, for the reasons stated in Student Rule 7, or other reason deemed appropriate by the instructor.

Please refer to [Student Rule 7](#) in its entirety for information about makeup work, including definitions, and related documentation and timelines.

Absences related to Title IX of the Education Amendments of 1972 may necessitate a period of more than 30 days for make-up work, and the timeframe for make-up work should be agreed upon by the student and instructor" ([Student Rule 7, Section 7.4.1](#)).

"The instructor is under no obligation to provide an opportunity for the student to make up work missed because of an unexcused absence" ([Student Rule 7, Section 7.4.2](#)).

Students who request an excused absence are expected to uphold the Aggie Honor Code and Student Conduct Code. (See [Student Rule 24](#).)

Academic Integrity Statement and Policy

"An Aggie does not lie, cheat or steal, or tolerate those who do."

"Texas A&M University students are responsible for authenticating all work submitted to an instructor. If asked, students must be able to produce proof that the item submitted is indeed the work of that student. Students must keep appropriate records at all times. The inability to authenticate one's work,

should the instructor request it, may be sufficient grounds to initiate an academic misconduct case” ([Section 20.1.2.3, Student Rule 20](#)).

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You can learn more about the Aggie Honor System Office Rules and Procedures, academic integrity, and your rights and responsibilities at aggiehonor.tamu.edu. You can also contact Graduate Studies at 214-828-8182, Student Affairs at 214-828-8210, or your Program Director, for guidance.

Americans with Disabilities Act (ADA) Policy

Texas A&M School of Dentistry

Texas A&M University is committed to providing equitable access to learning opportunities for all students. If you experience barriers to your education due to a disability or think you may have a disability, please contact the Office for Academic Affairs in the Administration Building Room 514 or at (214)-828-8978 or ajwilson@tamu.edu. Disabilities may include, but are not limited to attentional, learning, mental health, sensory, physical, or chronic health conditions. All students are encouraged to discuss their disability related needs with Disability Resources and their instructors as soon as possible.

Title IX and Statement on Limits to Confidentiality

Texas A&M University is committed to fostering a learning environment that is safe and productive for all. University policies and federal and state laws prohibit gender-based discrimination and sexual harassment, including sexual assault, sexual exploitation, domestic violence, dating violence, and stalking.

With the exception of some medical and mental health providers, all university employees (including full and part-time faculty, staff, paid graduate assistants, student workers, etc.) are Mandatory Reporters and must report to the Title IX Office if the employee experiences, observes, or becomes aware of an incident that meets the following conditions (see [University Rule 08.01.01.M1](#)):

- The incident is reasonably believed to be discrimination or harassment.
- The incident is alleged to have been committed by or against a person who, at the time of the incident, was (1) a student enrolled at the University or (2) an employee of the University.

Mandatory Reporters must file a report regardless of how the information comes to their attention – including but not limited to face-to-face conversations, a written class assignment or paper, class discussion, email, text, or social media post. Although Mandatory Reporters must file a report, in most instances, a person who is subjected to the alleged conduct will be able to control how the report is handled, including whether or not to pursue a formal investigation. The University’s goal is to make sure you are aware of the range of options available to you and to ensure access to the resources you need.

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Students can learn more about filing a report, accessing supportive resources, and navigating the Title IX investigation and resolution process on the University’s [Title IX webpage](#). School of Dentistry students

can contact Graduate Studies at 214-828-8182, Student Affairs at 214-828-8210, Security at 214-828-8335, their Program Director, or their Department Head to report an incident.

Statement on Mental Health and Wellness

Texas A&M University recognizes that mental health and wellness are critical factors that influence a student's academic success and overall wellbeing. Students are encouraged to engage in healthy self-care by utilizing available resources and services on your campus

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Students who need someone to talk to can call the TAMU Helpline (979-845-2700) from 4:00 p.m. to 8:00 a.m. weekdays and 24 hours on weekends. 24-hour emergency help is also available through the National Suicide Prevention Hotline (800-273-8255) or at suicidepreventionlifeline.org. You can also contact Graduate Studies at 214-828-8182 or Student Affairs at 214-828-8210 for a referral to a local counselor. These counseling sessions are private and confidential, as are any referral requests.

Campus-Specific Policies

Statement on the Family Educational Rights and Privacy Act (FERPA)

FERPA is a federal law designed to protect the privacy of educational records by limiting access to these records, to establish the right of students to inspect and review their educational records and to provide guidelines for the correction of inaccurate and misleading data through informal and formal hearings. Currently enrolled students wishing to withhold any or all directory information items may do so by going to howdy.tamu.edu and clicking on the "Directory Hold Information" link in the Student Records channel on the MyRecord tab. The complete [FERPA Notice to Students](#) and the student records policy is available on the Office of the Registrar webpage.

Items that can never be identified as public information are a student's social security number, citizenship, gender, grades, GPR or class schedule. All efforts will be made in this class to protect your privacy and to ensure confidential treatment of information associated with or generated by your participation in the class.

Directory items include name, UIN, local address, permanent address, email address, local telephone number, permanent telephone number, dates of attendance, program of study (college, major, campus), classification, previous institutions attended, degrees honors and awards received, participation in officially recognized activities and sports, medical residence location and medical residence specialization.