Course Information

Course Number: 7230/DH 4810
Course Title: Local Anesthesia and Nitrous Oxide/Conscious Sedation
Section: N/A
Time: Asynchronous
Location: Remotely
Credit Hours:

Instructor Details

Instructor: Marianela Gonzalez
Office: #155 Office Building
Phone: 214-828-8170
E-Mail: gonzalezm@tamu.edu
Office Hours: 8:00 am - 05:00 pm

Course Description
The primary method of presentation is lecture, a detailed outline is provided to each student to facilitate the lecture or textbook notes to supplement the outline. Students are given outside assignments to practice dose calculations for each local anesthetic and for a variety of patients. The lecture material is supplemented with videotapes designed to show the correct administration techniques, the neural innervations of each area of the oral cavity and the area anesthetized.

Course Prerequisites

1. Provide humane and compassionate patient care for a diverse patient population.
2. Use oral, written and electronic information resources in contemporary practice as an aid for self-assessment and lifelong learning.
3. Advocate, plan and participate in institutional and community-based programs for improving, promoting and protecting oral health and expanding access to oral health services.
4. Obtain a diagnostic database including the patient’s chief complaint, the dental, medical and psychosocial histories.

Course Learning Outcomes
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. Describe, define and demonstrate the armamentarium used in local anesthesia procedures.
3. Discuss and define the basic terminology used in dentistry to describe injection techniques and responses to local anesthetic injections.
4. Discuss and recognize the fundamental anatomy, physiology and pharmacology involved in the skillful implementation of local anesthetics.
5. Describe and discuss 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. Learn 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, discuss and recognize the fundamental techniques to develop competency required for the administration of both mandibular and maxillary local anesthetics.

9. Mandatory participation in local anesthetics lab leading to competency of administration of mandibular and maxillary local anesthetics.

10. Recognize and discuss local anesthetic failures and corrective measures.

11. Learn the foundational information necessary for the development of competency in the maintenance of proper records with accurate entries to reflect any medical, drug or complications associated with local anesthetic administration.

12. Be able to anesthetize successfully a colleague and a patient, using the inferior alveolar nerve and lingual in the mandible, PSA and infiltrative techniques in the maxilla

**Related Competencies:**

1. Provide humane and compassionate patient care for a diverse patient population.

2. Use oral, written and electronic information resources in contemporary practice as an aid for self-assessment and lifelong learning.

3. Advocate, plan and participate in institutional and community-based programs for improving, promoting and protecting oral health and expanding access to oral health services.

4. Obtain a diagnostic database including the patient’s chief complaint, the dental, medical and psychosocial histories.

5. Perform a physical intra-oral and extra-oral examination of the patient including assessment of vital signs, radiological examination and supporting diagnostic aids and laboratory tests.

6. Recognize the presence and oral manifestations of systemic disease and how the disease and its treatment affect the delivery of dental care.

7. Develop a comprehensive, properly sequenced treatment plan based on diagnostic data with alternative treatment options sensitive to patient priorities.

8. Communicate with other health care professionals to obtain additional information for evaluation and treatment.

9. Obtain and informed consent for dental treatment from the patient or responsible person.

10. Prevent, recognize, and manage dental and medical emergencies encountered in the practice of general dentistry after using local anesthetics or sedating a patient with nitrous oxide.

**Dental Hygiene Students:**

1. Apply ethical reasoning to dental hygiene and practice with professional integrity

2. Comply with state and federal laws governing the practice of dentistry and dental hygiene.
3. Apply critical thinking skills and evidence-based decision making to the practice of
dental hygiene
4. Contribute to the knowledge base of dental hygiene.
5. Determine medical conditions that require special precautions or consideration prior to
or during dental hygiene treatment.
6. Perform an extraoral and intraoral examination of the patient including assessment of
vital signs and radiographic examination, and distinguish normal from abnormal
findings.
7. Manage the patient at risk for a medical emergency, and be prepared to handle the
emergency should it occur during and appointment.
8. Recognize predisposing, etiologic risk factors, and life style choices that may require
intervention to prevent disease.
9. Determine the need for referral to the appropriate health professional.
10. Control pain and anxiety during treatment through the use of accepted clinical
techniques and appropriate behavioral management strategies.

Textbook and/or Resource Materials
Handbook of Nitrous Oxide and Oxygen Sedation by Morris, Clark Ann Brunick, published by CV Mosby,
latest edition.
Patient evaluations are assisted with the use of Mosby's Dental Drug Reference by Gage TW and Pickett
FA, 6th Ed.

Grading Policy
There will be a mid-semester and a final examination covering all course material, including assigned
reading materials. If you miss the midterm or final for a non-excused, the make-up exam will be an Essay
examination. The Final Course grade will be a weighted compilation of the midterm & final
examinations. The course grade will be retroactively changed to “Failure” if any student fails to
participate and complete the anesthesia lab, suture lab and complete the competency form applying
local anesthesia (Inferior alveolar, lingual nerve anesthesia) to a patient, student will be held during the
Spring Semester, 2021, until the student demonstrates competency to control anxiety using nitrous
oxide and successfully anesthetize a patient. The weighted value of all graded components is:

Midterm Exam: 50%  Passing Grade:  75
Final exam: 50%  *(Pass/Fail, Fall Semester, 2020)
Clinical Competency: 0%*  *(Pass/Fail, Fall Semester, 2020)
You cannot fail the Final Examination and pass the course. Anyone scoring below 75 on the adjusted Final Examination score will have to retake the test to obtain a passing score, but the original exam score will be used to establish the course grade. If the 2nd exam is also failed, a grade of 74 will be submitted.

**Graded Attendance by watching the recorded lectures** – lack of unexcused attendance (review the recorded lectures), can affect the performance in the course. If there is reason to miss school, you need to notify Dr. Barrington, or Dr. Lacy at the moment you decide not to show up or miss an exam

**Late Work Policy**

The late work policy should define what constitutes late work (e.g., submitting a deliverable after the established deadline). Work submitted by a student as makeup work for an excused absence is not considered late work and is exempted from the late work policy. (See Student Rule 7.)

**Course Schedule**

<table>
<thead>
<tr>
<th>Date</th>
<th>Session Title/Topic</th>
<th>Instructor(s) L. Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/07/21</td>
<td>Pharmacology of Local Anesthetics and Pharmacology of Vasoconstrictors</td>
<td>Dr. Read-Fuller</td>
</tr>
<tr>
<td>01/14/21</td>
<td>Local Anesthesia and the Medically Compromised Patient &amp; Local and Systemic Complications</td>
<td>Dr. Read-Fuller</td>
</tr>
<tr>
<td>01/21/21</td>
<td>EXAM I – Armamentarium</td>
<td>Dr. M. Gonzalez</td>
</tr>
<tr>
<td>01/28/21</td>
<td>Techniques of Administration – Maxillary and Techniques of Administration – Mandibular</td>
<td>Dr. M. Gonzalez</td>
</tr>
<tr>
<td>02/04/21</td>
<td>Techniques of Administration (continued) Reasons for failure – Non-traditional Methods. Local Anesthesia and the Medically Compromised Patient &amp; Local and Systemic Complications</td>
<td>Dr. M. Gonzalez</td>
</tr>
<tr>
<td>02/11/21</td>
<td>EXAM II – N₂O/O₂ Objectives, Labs, TSBDE Anesthesia Guidelines and N₂O/O₂ Pharmacology</td>
<td>Dr. M. Gonzalez</td>
</tr>
<tr>
<td>02/18/21</td>
<td>N₂O/O₂ Indications, Clinical Considerations, Occupational Exposure</td>
<td>Dr. M. Gonzalez</td>
</tr>
<tr>
<td>02/25/21</td>
<td>N₂O/O₂ Clinical Considerations continued and N₂O/O₂ Video “Inhalational Sedation with Nitrous Oxide”</td>
<td>Dr. M. Gonzalez</td>
</tr>
<tr>
<td>03/04/21</td>
<td>FINAL EXAM</td>
<td>Dr. M. Gonzalez</td>
</tr>
</tbody>
</table>
Traditionally Delivered Course
Spring course, eight weeks. Recorded lectures with the possibility of scheduling Zoom meetings with faculty, based on availability of students and faculty. Each class is two hours of recorded lectures. Laboratory time is 3 hours for local anesthesia and suture techniques, plus a separate lab for nitrous oxide use for about 45 minutes. The rotation for these labs is arranged by clinical affairs, if the student is excused to miss the lab, the student needs to notify Ms. Gracie Perez in clinical affairs to assigned another student to the rotation.

Technology Support – If there is a need to contact the faculty or course director, emails are faster and more efficient, our offices are in the old building and we are in the clinics 80% of the time. Course material is based on blackboard. Your main point of contact will be the faculty associated with the specific lecture. Technical support is available to you by contacting Miss Carmina Castro or Jeff Lowrey. Please, if you have any difficulties accessing the material, don’t wait until the midterm week to start getting help. In case of medical issues or medical emergencies in the family, you need to contact immediately Dr Jennifer Barrington, Dr Sarah Allen, Dr Ernestine Lacy, and the course director. Don’t wait until after an exam to say you were sick and that is the reason why you failed the exam. If you have not notified anybody of your situation before, that will not be an excuse to fail an exam.

Learning Resources – Lectures and power points will be available in blackboard before your course will start. We also encourage you to read the recommended books to have plenty of knowledge and be prepared for your exam. The library is located between the school and the hospital, right before the stairs to the main cafeteria. If you only study from the power points, you won’t be able to comprehend the material to succeed the course. We monitor each access to each lecture per students, we know how many times you have access the lecture and if you speed forward the lecture. The Study Hub website lists many on-campus learning resources to support students in achieving academic excellence.

University Policies
This section outlines the university level policies that must be included in each course syllabus. The TAMU Faculty Senate established the wording of these policies.

NOTE: Faculty members should not change the written statements. A faculty member may add separate paragraphs if additional information is needed.

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.

Laboratory/Clinic Policies and Procedures:
Mandatory participation in local anesthetics/suturing and nitrous lab. Missing any of these activities will prevent the student from start to see patients in clinic lab.

The course in local anesthesia is fundamental to the practice of dentistry. Dentists are expected to be highly competent in providing pain control for minor to complex procedures. Therefore, attendance in this course is mandatory. Excused absences will be verified and granted by the Course Director or Director of Student Affairs, in accordance with the College’s published attendance policy. It is your responsibility to convert unexcused absences into excused absences. Important: When in presence courses, a student who accumulates more than 2 unexcused absences in any single quarter, as determined by the Course Director, will receive one full grade deduction on their final grade for each unexcused absence over two. All assignments must be completed in order to receive a final course grade.

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.)

Remediation Policy: Our department’s policy is that we will not conduct a special remediation course for any student failing this course who has 4 or more unexcused absences per semester. If your failure to attend lectures contributed to your failure, then you must accept the consequences. More than 5 unexcused absences will result in an automatic FAILURE in the course. Many aspects of this course can only be understood if visualized on the screen. If a student is not remediated, he or she will have to reregister for the course when it is offered again during the following academic year. He/she will also be ineligible to register for subsequent 3rd and 4th year oral maxillofacial surgery courses (including clinical work) for which this course is a prerequisite until successful remediation has been completed. If a passing grade is not attained but attendance and monitoring of the reviewed lectures have been acceptable, a remediation course will be offered to the student during the subsequent
(contingent on Student Promotions Committee recommendations). 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.

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).

You can learn more about the Aggie Honor System Office Rules and Procedures, academic integrity, and your rights and responsibilities at aggiehonor.tamu.edu.

**NOTE:** Faculty associated with the main campus in College Station should use this Academic Integrity Statement and Policy. Faculty not on the main campus should use the appropriate language and location at their site.

Americans with Disabilities Act (ADA) Policy

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 Disability Resources in the Student Services Building or at (979) 845-1637 or visit disability.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.

**NOTE:** Faculty associated with the main campus in College Station should use this Americans with Disabilities Act Policy statement. Faculty not on the main campus should use the appropriate language and location at their site.

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.

Students wishing to discuss concerns in a confidential setting are encouraged to make an appointment with Counseling and Psychological Services (CAPS).

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.

NOTE: Faculty associated with the main campus in College Station should use this Title IX and Statement on Limits of Liability. Faculty not on the main campus should use the appropriate language and location at their site.

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 the resources and services available from Counseling & Psychological Services (CAPS). 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.

COVID-19 Temporary Addendum to Minimum Syllabus Requirements

The Faculty Senate temporarily added the following statements to the minimum syllabus requirements in Spring 2021 as part of the university’s COVID-19 response.

Campus Safety Measures

To promote public safety and protect students, faculty, and staff during the coronavirus pandemic, Texas A&M University has adopted policies and practices for the Spring 2021 academic term to limit virus transmission. Students must observe the following practices while participating in face-to-face
courses and course-related activities (office hours, help sessions, transitioning to and between classes, study spaces, academic services, etc.):

- Self-monitoring—Students should follow CDC recommendations for self-monitoring. **Students who have a fever or exhibit symptoms of COVID-19 should participate in class remotely if that option is available, and should not participate in face-to-face instruction.**
- Face Coverings—**Face coverings** (cloth face covering, surgical mask, etc.) must be properly worn in all non-private spaces including classrooms, teaching laboratories, common spaces such as lobbies and hallways, public study spaces, libraries, academic resource and support offices, and outdoor spaces where 6 feet of physical distancing is difficult to reliably maintain. Description of face coverings and additional guidance are provided in the Face Covering policy and Frequently Asked Questions (FAQ) available on the Provost website.
- Physical Distancing—Physical distancing must be maintained between students, instructors, and others in course and course-related activities.
- Classroom Ingress/Egress—Students must follow marked pathways for entering and exiting classrooms and other teaching spaces. Leave classrooms promptly after course activities have concluded. Do not congregate in hallways and maintain 6-foot physical distancing when waiting to enter classrooms and other instructional spaces.
- To attend a face-to-face class, students must properly wear an approved face covering. If a student refuses to wear a face covering, the instructor should ask the student to leave and join the class remotely. If the student does not leave the class, the faculty member should report that student to the Student Conduct office for sanctions. Additionally, the faculty member may choose to teach that day’s class remotely for all students, or dismiss the class in the case of a traditional face to face lecture.

**Personal Illness and Quarantine**

Students required to quarantine must participate in courses and course-related activities remotely, if that option is available, and **must not attend face-to-face course activities.** Students should notify their instructors of the quarantine requirement. Students under quarantine are expected to participate in courses and complete graded work unless they have symptoms that are too severe to participate in course activities.

Students experiencing personal injury or illness that is too severe for the student to attend class qualify for an excused absence (See Student Rule 7, Section 7.2.2.) To receive an excused absence, students must comply with the documentation and notification guidelines outlined in Student Rule 7.

**College and Department Policies**

College and departmental units may establish their own policies and minimum syllabus requirements. As long as these policies and requirements do not contradict the university level requirements, colleges and departments can add them in this section.