Texas A&M University College of Dentistry

Course Syllabus

Course Number and Name: DHS 4810/7530 - Local Anesthesia and Nitrous Oxide/Oxygen Sedation

Course Type: Lecture  Laboratory  Clinical  Seminar  Selective

Academic Year/Semester Offered: 2017-2018 ___Fall  X_ Spring ___ Summer Session

Course Director: David M. Grogan, DDS, MSD

Other Participating Faculty: Marianela Gonzalez, DDS, MS

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 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. 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.

**Learning Outcomes/ Related Competencies:**

1.2 Provide humane and compassionate patient care for a diverse patient population.
2.1 Use oral, written and electronic information resources in contemporary practice as an aid for self-assessment and lifelong learning.
3.2 Advocate, plan and participate in institutional and community-based programs for improving, promoting and protecting oral health and expanding access to oral health services.
4.1 Obtain a diagnostic database including the patient’s chief complaint, the dental, medical and psychosocial histories.
4.2 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.
5.2 Recognize the presence and oral manifestations of systemic disease and how the disease and its treatment affect the delivery of dental care.
6.1 Develop a comprehensive, properly sequenced treatment plan based on diagnostic data with alternative treatment options sensitive to patient priorities.
6.2 Communicate with other health care professionals to obtain additional information for evaluation and treatment.
6.3 Obtain and informed consent for dental treatment from the patient or responsible person.
7.1 Prevent, recognize, and manage dental and medical emergencies encountered in the practice of general dentistry.

**Dental Hygiene Student:**

1.1 Apply ethical reasoning to dental hygiene and practice with professional integrity
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.
8.2 Control pain and anxiety during treatment through the use of accepted clinical techniques and appropriate behavioral management strategies.
**Evaluation Criteria/Methods:**
Student performance is evaluated by objective examination with an average score of 70 required for satisfactory achievement.

**Grading Scale:**
- A = 90-100
- B = 80-89
- C = 75-79
- D = 70-74
- F = <70

**Learning Materials:**
- Patient evaluations are assisted with the use of Mosby’s Dental Drug Reference by Gage TW and Pickett FA, 6th Ed.

**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 at the time of presentation. 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 has 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.

**Attendance and Make-up Policy:**
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:** Any 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.
Laboratory/Clinic Policies and Procedures:
Mandatory participation in local anesthetics/suturing lab.

Special Accommodation for Persons with Disabilities:
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Dr. Paul Dechow, Associate Dean for Academic Affairs, Room 514, or call 214 828 8208 for additional information.

Academic Integrity Statement and Policy:
State what you want but then include:

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

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the honor Code, to accept responsibility, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System.

http://aggiehonor.tamu.edu
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<td>Pharmacology of Local Anesthetics and Pharmacology of Vasoconstrictors</td>
<td>Dr. Grogan</td>
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<td>1/18/18</td>
<td>Local Anesthesia and the Medically Compromised Patient &amp; Local and Systemic Complications</td>
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<td>1/25/18</td>
<td><strong>EXAM I</strong> – Armamentarium</td>
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<td>2/01/18</td>
<td>Techniques of Administration – Maxillary and Techniques of Administration – Mandibular</td>
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<td>Techniques of Administration (continued) Reasons for failure – Non-traditional Methods</td>
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<td>2/15/18</td>
<td><strong>EXAM II</strong> – N₂O/O₂ Objectives, Labs, TSBDE Anesthesia Guidelines and N₂O/O₂ Pharmacology</td>
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<td>2/22/18</td>
<td>N₂O/O₂ Indications, Clinical Considerations, Occupational Exposure</td>
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<td>3/01/18</td>
<td>N₂O/O₂ Clinical Considerations continued and N₂O/O₂ Video “Inhalational Sedation with Nitrous Oxide”</td>
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