

Herman Ostrow School Of Dentistry Of USC

ANAT 701- Advanced Head & Neck Anatomy

Summer 2022--- Mondays @ 8:00am - 9:30am

Course Type: Lecture

Location: USC Zoom

Director: Mahsa Alavi, DMD, MS

Office: Zoom/Online Meeting ID: 918 5932 5552 Passcode: 364217

Office Hours: Mondays & Fridays 12:00pm- 1:00pm

Alternative office hours: email for an appointment

Contact Info: malavi@usc.edu

Course Description

Detailed study of structure and function of the orofacial region including recent research and advances in dentistry. An anatomical study of the head and neck, including skeletal, muscular, nervous, circulatory, glandular, and fascial spaces. Clinical correlates that relate to dentistry are emphasized to help the students apply anatomical concepts to patient diagnosis and treatment.

Learning Objectives

Upon completion of the course, each student will be able to:

1. Demonstrate a comprehensive working knowledge of head and neck anatomical structures.
2. Apply knowledge of anatomy to clinical correlates in the practice of dentistry.
3. Apply knowledge of anatomy to physiology and medical conditions.

Learning Resources

Required Textbook:

Netter's Head and Neck Anatomy for Dentistry, by Neil Norton, PhD., Elsevier, 3rd Ed., 2016. ISBN: 978-0-323-39228-0

Available in e-book at Wilson Dental Library

Additional resources:

Available in print at Wilson Dental Library:

1. Essentials of Oral Histology and Embryology: A Clinical Approach, by Daniel J. Chiego Jr. MS PhD. Mosby; 4 editions (March 5, 2013). ISBN-13: 978-0323082563

2. Myofascial Pain and Dysfunction: The Trigger Point Manual; Vol. 1. The Upper Half of Body, Simons, M.D., David and Travell, M.D. Janet. Lippincott Williams & Wilkins; 2nd edition (November 1, 1998). ISBN-13: 978-0683083637
3. Textbook of Head and Neck Anatomy (Point (Lippincott Williams & Wilkins)) by [James L. Hiatt](#) and [Leslie P. Gartner](#). Lippincott Williams & Wilkins; Fourth edition (March 27, 2009). ISBN: 978-0781789325
4. Essential Clinical Anatomy, by [Keith L Moore](#), Lippincott Williams & Wilkins, 5th edition (Feb 21, 2014). ISBN-13: 978-1451187496

Available in e-book at Wilson Dental Library:

1. Loukas M, Tubbs RS, Benninger B. Clinical Applications. In: Gray's Clinical Photographic Dissector of the Human Body. Second Edition.; 2019:43-44. doi:10.1016/B978-0-323-54417-7.00030-9
2. Sobotta J, Paulsen F, Waschke J, Klonisch T, Hombach-Klonisch S. Sobotta Atlas of Anatomy. Volume 3, Head, Neck and Neuroanatomy. Sixteenth edition. Elsevier GmbH;2018
3. Irnich D. Myofascial Trigger Points: Comprehensive Diagnosis and Treatment. Elsevier; 2012.

SCHEDULE/COURSE CALENDAR

Students will attend weekly lectures. Students are expected to read textbook assignments prior to class lecture.

| Date | Topics | Reading Assignments (Due before class) |
|-----------|---|--|
| 5/2/2021 | Course Introduction Review of Course Syllabus. Review of Embryology of the Head and Neck | Read Netter Chapter 1 |
| 5/9/2021 | The Skeletal System. Major bones of the skull. foramina and landmarks of the skull and mandible. the paranasal sinuses and mastoid sinus. landmarks of the nasal cavity and orbital cavity. Clinical correlate of the skull to radiology. | Read Netter Chapter 2 Chapter 10 (pages 258,260,261) Chapter 11 (pages 276,277) Chapter 12 (pages 312-316, 320, 321, 325, 329) Chapter 19 (page 513) |
| 5/16/2021 | The Muscular System. Clinical correlates to surface anatomy. Clinical correlates to local anesthetic injection. | Read Netter Chapter 4 (pages 109, 119,126,127,128) Chapter 5 (pages 161-169) Chapter 15 (pages 426, 430, 431) Chapter 14 (pages 406-409) Chapter 13 (pages 350-353) |

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| 5/23/2021 | TMJ and Muscles of Mastication. Clinical correlates of joint sounds to the clinical classification of disc displacements. Trigger points and referred pain. | Read Netter Chapter 8 (pages 229-233) Chapter 9 (pages 241-247, 251-255) |
| 5/30/2021 | University Holiday- Memorial Day | |
| 6/6/2021 | The Vascular System. Arterial blood supply to the head and neck. Venous drainage of the head and neck. Clinical correlates. | Read Netter Pages 620-622: heart Pages 58, 131: vertebral a. Pages 530, 531: ophthalmic a. Page 134: common carotid Pages 132-134, 170-174: branches of the external carotid a. Page 210: venous drainage of face Pages 216-218: branches of maxillary a. Pages 261-263. 281: arteries within the pterygopalatine fossa |
| 6/13/2021 | Basic Neuroanatomy and the 12 Cranial Nerves. The components of the central nervous system. The components of the peripheral nervous system. The components of the autonomic nervous system. The pathways of the 12 cranial nerves. Structures of the nervous system and associated regional structures. Clinical correlates of cranial nerves and CN VII | Read Netter Chapter 3 (exclude pp 82-93) Chapter 4 pp.144-146: spinal nerves C1–C4 Chapter 5 pp. 190, 191: CN VII Chapter 20 pp. 543-547, 551: Autonomics |
| 6/20/2020 | MIDTERM EXAM | |

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| 6/27/2021 | <p>The Trigeminal Nerve. The divisions of the trigeminal nerve. The pathways of the branches of the ophthalmic division of the trigeminal nerve. The pathways of the branches of the maxillary division of the trigeminal nerve. The pathways of the branches of the mandibular division of the trigeminal nerve. The autonomic nerves that travel with the trigeminal nerve. Innervations to the tongue. Clinical correlates: trigeminal neuralgia, herpes zoster, trigger points, referred pain, centralization of pain.</p> | <p>Read Netter Chapter 3 pp. 82-92: CN V Chapter 5 pp. 177-183: Nerve supply face Chapter 13 pp.373-376, 379, 380: nerve supply to oral cavity Chapter 20 Autonomics</p> |
| 7/4/2021 | <p>University Holiday- Independence Day</p> | |
| 7/11/2021 | <p>Glandular Tissues of the Head and Neck. The salivary glands and their function. The autonomic innervation of the salivary glands and lacrimal glands. The lacrimal glands and their function. The pituitary gland and its function. The thyroid gland and its function. The parathyroid glands and their function. Clinical correlates of salivary glands such as pharmacologic effects, sialoliths, mucoceles, nicotine stomatitis, adenomas, adenocarcinomas.</p> | <p>Read Netter Chapter 6 pp. 187-198: parotid gland Chapter 13 pp. 381-387: 3 major salivary glands Chapter 14 pp. 410,412: innervation to tongue Chapter 4 pp. 119, 123, 124: thyroid Chapter 16 p. 462: cricothyrotomy Chapter 19 p. 519: lacrimal Chapter 20: autonomics to glands</p> |
| 7/18/2021 | <p>Fascial Spaces and the Spread of Dental Infections. The various routes in the spread of dental infections. Fascia and fascial spaces. The locations of the major fascial spaces. Various etiologies of fascial space infections. Fascial pathways in the spread of dental infections. The clinical correlates of fascial spaces to the delivery of local anesthetic injections and to iatrogenic cellulitis.</p> <p>The Lymphatic System. The general lymphatic system and its components. The major groups of lymph nodes of the head and neck. Tonsillar tissues of the oral cavity and pharynx. Clinical correlates of tonsillar tissue to a mouth breather. Clinical correlates of the lymphatic system to lymphadenopathy, lymphedema, and cancer.</p> <p>Review of local anesthetic injections</p> | <p>Read Netter Chapter 17</p> <p>Read Netter Appendix B pp. 655-660 Lymphatics Page 393</p> <p>Chapter 21: Local anesthetic injections</p> |
| 7/25/2021 | <p>FINAL EXAM - ORAL</p> | |

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| 8/01/2021 | FINAL EXAM - ORAL | |
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The course director has the discretion to change course content and the order of presentation in order to meet learning objectives.

COURSE REQUIREMENTS AND GRADING/EVALUATION METHODS:

This is a pass/fail course. To pass the course each student must obtain at least 70%.

GRADE DISTRIBUTION

300 Possible Points

- 1. Quizzes 90 points possible
- 2. In class activities 20 points possible
- 3. Midterm Exam 50 points possible
- 4. Final Exam 100 points possible

GRADING SCALE:

- 90--100% which is 270 – 300 points = A
- 80—89% which is 240 – 269 points = B
- 70—79% which is 210 – 239 points = C
- Below 70% which is below 180 points = F

SUMMARY OF ASSIGNMENTS, EXAMS

- 1. Quizzes and Midterm will include multiple choice, fill in the blank, and identification of anatomical structures.
- 2. The final exam is an oral exam (case presentation)
- 3. Most class sessions will include short assignments that must be submitted to earn the in-class activity points.
- 4. All the quizzes must be completed within 2 weeks of the opening on blackboard.
- 5. Each week’s quiz will be open on Monday following that week’s lecture.

Course Policies:

- 1. Attendance is mandatory for all lectures.

2. If an absence is unavoidable, then **before** class starts the resident is to email the course director at malavi@usc.edu. An email during or after class is an unexcused absence.
3. Cell phones are to be turned off and not used during class time.
4. Residents are expected to be respectful of other students and the course director. Any behavior deemed unprofessional by the course director will necessitate a meeting with the course director and the chair of the program.
5. Residents are expected to abide by the USCSD ethics policies.

Zoom etiquette:

1. Join the session from a quiet environment
2. Mute your microphone when you are not speaking
3. Please use the raise hand feature if you have something to say during lectures
4. Enable your webcam during discussions
5. Synchronous sessions will be recorded and provided to all students asynchronously on blackboard

UNIVERSITY STATEMENTS ON ACADEMIC CONDUCT AND SUPPORT SYSTEMS

USC and Ostrow Statement on Academic Conduct and Support Systems

Academic and Professional Conduct: Should there be any suspicion of academic, professional, or ethical dishonesty, students are referred to the Ostrow Student Professional Performance Evaluation Committee (SPPEC). The review process can be found in the [Code of Ethics and Behavioral Guidelines](#) available on Dental Intranet.

Absence Policy: All students are to attend, arrive punctually and remain in attendance for all scheduled requirements. The term “requirements” is defined as all scheduled curriculums including small group learning casesessions, modules, labs, lectures, seminars, resource sessions, rotations, clinic assignments, extramural assignments, and special assignments or activities for which a student has been scheduled.

Absenteeism for any reason must be reported to Academic Affairs via e-mail at ABSENT-L@usc.edu before the session begins. Include the following information: Name, Student 5-digit Dental School ID, and the reason for absence.

IF YOUR ABSENCE DOES NOT FALL WITHIN THE CATEGORIES LISTED BELOW, THE ABSENCE IS UNEXCUSED AND MAY HAVE A NEGATIVE ACADEMIC IMPACT.

- **Illness**
- **Death in Family**
- **Religious/Holy Day Observance**

Students must be physically present when required, which may include some evenings, nights, and weekends. Religious, physical, or other accommodations may not be available to excuse students from required pre-clinical and/or clinical hours.

Students who anticipate an absence for religious observance of holy days, scheduled appointments etc. must notify in writing (absent-l@usc.edu) the Office of Academic Affairs as well as the case facilitator, module or rotation instructor, group practice director and their small group learning team no later than 2 weeks prior to the intended absence.

The full Absence Policy is available on the Dental Intranet. Students are responsible for knowing the full policy.

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call
studenthealth.usc.edu/counseling

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call
suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention and Services (RSVP) - (213) 740-9355(WELL), press “0” after hours – 24/7 on call
studenthealth.usc.edu/sexual-assault

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED)- (213) 740-5086 | Title IX – (213) 821-8298
equity.usc.edu, titleix.usc.edu

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following *protected characteristics*: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations. The university also prohibits sexual assault, non-consensual sexual contact, sexual misconduct, intimate partner violence, stalking, malicious dissuasion, retaliation, and violation of interim measures.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298

[usc-advocate.symplcity.com/care report](https://usc-advocate.symplcity.com/care-report)

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity | Title IX for appropriate investigation, supportive measures, and response.

The Office of Disability Services and Programs - (213) 740-0776

dsp.usc.edu

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

Campus Support & Intervention - (213) 821-4710

campussupport.usc.edu

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101

diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

dps.usc.edu, emergency.usc.edu

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call

dps.usc.edu

Non-emergency assistance or information.

Office of the Ombuds - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

ombuds.usc.edu

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

Teaching Continuity Statement:

Blackboard learning management system, **zoom** videoconferencing, and the **ExamSoft** web-based assessment platform will be utilized for continuity planning in case of emergency. USC email will be utilized as the primary mode of communication. **Students are required to check their USC email regularly.**

In the Event of Technical Breakdowns (Ostrow): Students may submit assignments to the instructor via blackboard by the posted due date. Remember to frequently back-up your work, post assignments once completed, load files onto a digital drive, and keep a hard copy of papers/projects.

In case of need for IT help or loaner laptop, students may reach out to the following Ostrow resources:

. **Blackboard support:** Ben Creighton creighto@usc.edu, DEN 4242, Phone: 213-740-7881

. **ExamSoft support:** Cathy Tomlin Cathy.tomlin@usc.edu, DEN 4244 Phone: 213-740-6591

. **Zoom and Office of Information Technology (OIT):**

OstrowIT@usc.edu Office, DEN 4115, Help Desk: (213) 821-5447