



## Herman Ostrow School Of Dentistry Of USC

### ANAT 701- Advanced Head & Neck Anatomy

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**Summer 2023--- Mondays @ 8:00am - 9:30am**

**Course Type:** Lecture

**Location:** USC Zoom

**Director:** Mahsa Alavi, DMD, MS

**Office:** Zoom/Online **Meeting ID: 935 1715 0879 Passcode: 626895**

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

**Alternative office hours:** email for an appointment

**Contact Info:** mahsaa@ostrow.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. This course is designed for the dental residents and by completing this course students will develop an appreciation of their head and neck anatomy knowledge and value the application of this knowledge to their everyday dental practice.

#### 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, 3<sup>rd</sup> 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, 5<sup>th</sup> 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)
5/1/2023	Course Introduction Review of Course Syllabus. Review of Embryology of the Head and Neck	Read Netter Chapter 1
5/8/2023	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)
5/15/2023	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)
5/22/2023	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)
5/29/2023	<b>University Holiday- Memorial Day</b>	
6/5/2023	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
6/12/2023	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
6/19/2023	<b>MIDTERM EXAM</b>	

6/26/2023	<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>
7/3/2023	<p><b>University Holiday- Independence Day</b></p>	
7/10/2023	<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>
7/17/2023	<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>
7/24/2023	<p><b>FINAL EXAM - ORAL</b></p>	

7/31/2023	<b>FINAL EXAM - ORAL</b>	

**The course director has the discretion to change course content and the order of presentation 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**

The University of Southern California is foremost a learning community committed to fostering successful scholars and researchers dedicated to the pursuit of knowledge and the transmission of ideas. Academic misconduct contrasts with the university's mission to educate students through a broad array of first-rank academic, professional, and extracurricular programs and includes any act of dishonesty in the submission of academic work (either in draft or final form).

This course will follow the expectations for academic integrity as stated in the [USC Student Handbook](#). All students are expected to submit assignments that are original work and prepared specifically for the course/section in this academic term. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s). Students suspected of engaging in academic misconduct will be reported to the Office of Academic Integrity.

Other violations of academic misconduct include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see the [student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#).

Please ask me if you are unsure about what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

Collaboration. In this class, you are expected to submit work that demonstrates your individual mastery of the course concepts.

Group work. Unless specifically designated as a 'group project,' all assignments are expected to be completed individually.

If found responsible for an academic violation, students may be assigned university outcomes, such as suspension or expulsion from the university, and grade penalties, such as an "F" grade on the assignment, exam, and/or in the course.

### **Course Content Distribution and Synchronous Session Recordings Policies**

USC has policies that prohibit recording and distribution of any synchronous and asynchronous course content outside of the learning environment.

Recording a university class without the express permission of the instructor and announcement to the class, or unless conducted pursuant to an Office of Student Accessibility Services (OSAS) accommodation.

Recording can inhibit free discussion in the future, and thus infringe on the academic freedom of other students as well as the instructor. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

Distribution or use of notes, recordings, exams, or other intellectual property, based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study.

This includes but is not limited to providing materials for distribution by services publishing course materials. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the internet, or via any other media. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

**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](mailto: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 UNEXPECTED 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](mailto: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 Integrity:**

The University of Southern California is a learning community committed to developing successful scholars and researchers dedicated to the pursuit of knowledge and the dissemination of ideas. Academic misconduct, which includes any act of dishonesty in the production or submission of academic work, comprises the integrity of the person who commits the act and can impugn the perceived integrity of the entire university community. It stands in opposition to the university's mission to research, educate, and contribute productively to our community and the world.

All students are expected to submit assignments that represent their own original work, and that have been prepared specifically for the course or section for which they have been submitted. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s).

Other violations of academic integrity include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), collusion, knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university. All incidences of academic misconduct will be reported to the Office of Academic Integrity and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see [the student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#).

Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

**Students and Disability Accommodations:**

USC welcomes students with disabilities into all the University's educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations



for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at [osas.usc.edu](https://osas.usc.edu). You may contact OSAS at (213) 740-0776 or via email at [osasfrontdesk@usc.edu](mailto:osasfrontdesk@usc.edu).

### **Support Systems:**

#### *Counseling and Mental Health* - (213) 740-9355 – 24/7 on call

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

#### *988 Suicide and Crisis Lifeline* - 988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

#### *Relationship and Sexual Violence Prevention Services (RSVP)* - (213) 740-9355(WELL) – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

#### *Office for Equity, Equal Opportunity, and Title IX (EEO-TIX)* - (213) 740-5086

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.

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

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

#### *The Office of Student Accessibility Services (OSAS)* - (213) 740-0776

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

#### *USC Campus Support and Intervention* - (213) 740-0411

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

#### *Diversity, Equity and Inclusion* - (213) 740-2101

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

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) 442-1200 – 24/7 on call

Non-emergency assistance or information.

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

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.

[Occupational Therapy Faculty Practice](#) - (323) 442-2850 or [otfp@med.usc.edu](mailto:otfp@med.usc.edu)

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.

### **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 [creightob@usc.edu](mailto:creightob@usc.edu), DEN 4242, Phone: 213-740-7881

. **ExamSoft support:** Cathy Tomlin [Cathy.tomlin@usc.edu](mailto:Cathy.tomlin@usc.edu), DEN 4244 Phone: 213-740-6591

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

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