

ANATOMY AND PHYSIOLOGY- SPAU/NSC 3344 SPRING 2015

Instructor: Katharine “Kathy” Powers/ kap130730@utdallas.edu

Office Hours: by appointment (either 30 mins before class or 30 mins after class)

Teaching Assistant: Delaney Welch, dlw092120@utdallas.edu

Office Hours: T/R 2:45-3:45

Location: JO 3.306

Undergraduate Teaching Assistant: Shelby Kelly, snk130330@utdallas.edu

Undergraduate Teaching Assistant: Sarita Thotakat, spt130030@utdallas.edu

Days/Time: T/R 5:30- 6:45pm

Location: GR 4.428

Prerequisites: None

*This class is extremely detailed and will require the student to understand and implement complex concepts related to anatomy and physiological processes of speech, language, hearing, cognition and swallowing.

Course Description

This course will serve as a foundation of anatomy and physiology for all aspects of communication and cognition, including respiration, phonation, resonance, articulation, hearing, and neuroanatomy.

This course has been designed to ensure that students demonstrate required knowledge and skill as outlined in the Standards and Implementation Guidelines for the Certificate of Clinical Competence in Speech-Language Pathology. The specific standards addressed in this class are: III-A, III-B, III-C.

Student Learning Objectives

Students will:

1. Discuss the respiratory system for communication purposes by (Std. III-A, III-B, III-C)
 - a. List and describe functions of muscles involved in inhalation and exhalation
 - b. Describe skeletal support for respiration
 - c. Describe physiological mechanisms involved in breathing for speech
2. Discuss the phonatory system for communication purposes by (Std. III-A, III-B, III-C):
 - a. List cartilages within the phonatory system
 - b. List and describe functions of muscles involved in phonation
 - c. Describe the physiological processes involved in phonation
3. Discuss the articulation and resonance system by (Std. III-A, III-B, III-C):
 - a. Outline the skeletal system within the articulation and resonance systems
 - b. List and describe functions of muscles involved in articulation and resonance
 - c. Describe physiological processes involved in articulation, swallowing and resonance
4. Discuss the hearing system by (Std. III-A, III-B, III-C):
 - a. Describe the physical make up of the outer, middle and inner ear
 - b. Describe the physiological process of hearing
5. Discuss neuroanatomy for communication purposes by (Std. III-A, III-B, III-C):
 - a. List the anatomical landmarks of the brain and brainstem
 - b. List cranial nerves and discussing their impact on communication
 - c. Understand and apply basic medical terminology relevant for discipline

6. Apply above knowledge to describe deficits in the following areas for any one communication disorder: respiration, phonation, articulation, resonance, swallowing, neuroanatomy (Std. III-C).

Required Textbook

Seikel, J.A., King, D.W., & Drumright, D.G. (2010). Anatomy and Physiology for Speech, Language, and Hearing. (4th ed.). Clifton Park, NY: Delmar, Cengage Learning.

ISBN-10: **1428312234** ISBN-13: **978-1428312234**

****Lecture Notes****

Syllabus and class lecture notes will be posted on eLearning before each class. Timelines are subject to change at the discretion of the instructor.

Course Requirements

(1) Exams

There will be 4 exams during the semester worth 100 points each comprising **80% of your final grade**. Make-up exams by instructor authorization only for extenuating circumstances and will be comprised of **5 essay questions** worth 20 pts each. Multiple exams on one day is not considered extenuating circumstances so don't ask! Students **must** contact TA by time of class on exam date to participate in a make-up exam which will be scheduled within 3 weekdays of the scheduled exam and at the TA's convenience regarding time. Students are limited to **one** make-up exam if needed and medical note/obituary/other documentation is required. **Students who take exams at the disability services center should inform instructor prior to every exam regarding their exam time**. Please see me after class if you require accommodations.

Exam format: The exam format will include objective measures including but not limited to multiple choice and labeling. Exams will be based on lectures, readings and class discussion. In addition, exams may contain information that can only be obtained by attending class. You will need a scantron for each exam (4 total), the light pink form **#229630**, as well as your luckiest pencil!

(2) Medical Terminology Quizzes

There will be 7 terminology quizzes given during class throughout the semester. Your top 5 grades will count as the equivalent of one exam worth **20% of your final grade**. Each quiz is worth 20 pts X5 = 100pts. **There are NO MAKE-UPS** for these quizzes, but remember you are able to drop 2 quizzes.

(3) Attendance Bonus

If you attend all 4 exams **during the scheduled class time** and are present for all 7 medical terminology quizzes, 3 pts will be added to your raw score for this class. Again, this is all or nothing and there are **NO EXCEPTIONS**.

(4) Reviews

A review will be posted before each exam to assist with studying and prompt inquiries before testing. The review is NOT intended to be a comprehensive overview of all test content but should serve as an organized review of major concepts. Additionally, the class prior to exam is scheduled for review and questions or to complete any necessary information not covered during regularly scheduled classes.

***Leveling Graduate Students (COMD 5344)** – Students will be required to complete an additional project worth 100 points for a total point accumulation of 600 points.

Course Policies

Audio recording of lectures is permissible; however, video recording or photography of any kind is strictly prohibited. Cell phones are not to be used in a manner distracting to the instructor or others in the class.

Grading Policy – SPAU/NSC 3344

Acquired knowledge will be assessed via exams, which will cover information presented through lectures, readings, and class discussion.

- Four exams - 100 points each = 400 pts
- 7 Terminology quizzes – 20 points each = 100 pts (can drop 2 lowest grades)
- Attendance bonus - 3 pts added to final grade for attending all scheduled exams and taking all 7 terminology quizzes (to be given at the beginning of class).
- Total 500 pts

Final % score will be based on a total score of 500 points. Final letter grade will be based on the following scale:

SPAU/NSC 3344:

A+ 97-100	B+ 87-89	C+ 77-79	D+ 67-69	F below 60
A 93-96	B 83-86	C 73-76	D 63-66	
A- 90-92	B- 80-82	C- 70-72	D- 60-62	

LINKS

<http://www.adobe.com/products/acrobat/readstep2.html> [Download Adobe Acrobat]

CLASS SCHEDULE AND READINGS

(Descriptions and timelines are subject to change at the discretion of the instructor)

<u>Date</u>	<u>Topic</u>	<u>Chapter</u>	<u>Assignments/miscellaneous</u>
1/13/15	Introduction to A&P	1	
1/15/15	Overview	1	
1/20/15	Basic Neuro A&P	11/12	Ch 11, p 527-540, 595-633
1/22/15	Basic Neuro A&P	11/12	Ch 12, p 647-669
1/27/15	Respiration Anatomy	2	
1/29/15	Respiration Anatomy	2	
2/03/15	Respiration Physiology	3	
2/05/15	Functional Implications	2/3	Trach, vent, labs
2/10/15	REVIEW		Chap 1,2,11,12
2/12/15	Exam 1		
2/17/15	Phonation Anatomy	4	
2/19/15	Phonation Anatomy	4	
2/24/15	Phonation Anatomy	4	

2/26/15	Phonation Physiology	5	
3/03/15	Functional Implications	4/5	
3/05/15	Hearing Anatomy & Physiology	9/10	
3/10/15	REVIEW		
3/12/15	Exam 2		
3/24/15	Articulation Anatomy	6	
3/26/15	Articulation Anatomy	6	
3/31/15	Articulation Physiology	7	
4/02/15	Swallowing Physiology	8	
4/07/15	Functional Implications		
4/09/15	Oral Mech Exam/REVIEW		6,7,8
4/14/15	Exam 3		
4/16/15	Review of Neuro Overview	11/12	
4/21/15	Neuroanatomy – Lobes, Subcortical Structures, Circle of Willis	11	
4/23/15	Neuro Disorders	11	
4/28/15	Functional Implications/Guest Speaker	11,12	
4/30/15	REVIEW		11,12
5/05/15	Final Exam		

ASHA STANDARDS ADDRESSED IN THIS CLASS: How knowledge is conveyed and how knowledge and skill acquisition will be demonstrated

Standard III-A

The applicant must demonstrate knowledge of the principles of biological sciences, physical sciences, mathematics, and the social/behavioral sciences.

Specific knowledge will be demonstrated in this class in the areas of human anatomy and physiology pertaining to speech, language, hearing and swallowing.

Knowledge will be conveyed via class lectures and readings.

Acquisition will be demonstrated via class discussions, exams and required projects.

Standard III-B

The applicant must demonstrate knowledge of basic human communication and swallowing processes including their biological, neurological, acoustic, psychological, developmental, linguistic and cultural bases.

Specific knowledge will be demonstrated in this class in the areas of human anatomy and physiology pertaining to speech, language, hearing and swallowing.

Knowledge will be conveyed via class lectures and readings.

Acquisition will be demonstrated via class discussions, exams and required projects.

Standard III-C

The applicant must demonstrate knowledge of the nature of speech, language, hearing, and communication disorders and differences and swallowing disorders, including the etiologies, characteristic, anatomic/physiological, acoustic, psychological, developmental, and linguistic and cultural correlates.

Knowledge will be conveyed via class lectures and readings.

Acquisition will be demonstrated via class discussions, exams and required projects.

Students will demonstrate the following skills:

1. Ability to name and describe functions of muscles/cartilages involved in respiration, phonation, articulation, swallowing and hearing, as measured by: successful completion of assignments, exams and projects
- 2a. Ability to identify and name structures involved in phonation, articulation, swallowing and hearing, as measured by: successful completion of assignments, exams and projects
- 2b. Ability to identify and name structures of the central and peripheral nervous systems that play a role in speech, language and auditory processing, as measured by: successful completion of assignments, exams and projects
3. Ability to understand and describe the physiology of respiration, phonation, swallowing and hearing, as measured by: successful completion of assignments, exams and projects

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

These descriptions and timelines are subject to change at the discretion of the Instructor.