



CSD 4000 Anatomy & Physiology of Speech & Language

Harding University
College of Allied Health
3 Credit Hours
Class Meetings Times – T/R 1:00 – 2:15
Swaid 215

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Semester/Term: Fall 2022
Office Hours: by appointment via Google Meets
or in person – email for an appointment

Course Information

Course Communication Protocols

We plan to utilize Canvas Announcements as our primary means of communication with you as a group. We may also send emails to your Harding email account on occasion, especially for individual communication. We would prefer that you use our Harding emails and you can expect a reply from us within 24 hours during the week. Please don't expect emails to be answered during the weekend. Students are expected to check emails daily and a timely response from you is appreciated. We will use Google Meets as well as in-person meetings for office hours and are happy to schedule times to meet with you individually or in small groups to discuss any course concept, assignment, quiz or review an exam.

Classroom etiquette

As servants of Christ, we must know how to address each other via all methods of communication - whether online or on-ground. When it comes to our communication, let's remember the following: Harding University is a Christian university and expectations are that the relationship and communication style between one another should reflect Harding's Christian mission.

When communicating with teachers or classmates, please remain professional and courteous. Generally, we use person-first language (child with Down syndrome) rather than disability-first language (Down syndrome child); however some individuals prefer disability-first language (Deaf person, autistic child).

University Mission Statement

Harding's [mission](#) is to provide a quality education that will lead to an understanding and philosophy of life consistent with Christian ideals. This involves the following goals:

1. **Generally, the integration of faith, learning and living** - developing the whole person through a commitment to Christ and to the Bible as the Word of God, an emphasis on lifelong intellectual growth, and the encouragement of Christian service and world missions through a servant-leadership lifestyle.
2. **Specifically, the development of Christian scholarship** - while acknowledging dependence on God, stressing Christian commitment to intellectual excellence through a strong liberal arts foundation and effective professional preparation.
3. **The promotion of Christian ethics** - creating an atmosphere that emphasizes integrity and purity of thought and action.
4. **The development of lasting relationships** - fostering personal and social relationships through interaction among faculty, staff and students; and stressing a lifelong commitment to marriage and the Christian family.
5. **The promotion of wellness** - emphasizing that the body is the temple of the Holy Spirit and that lifetime health habits contribute to a better quality of life.
6. **The promotion of citizenship within a global perspective** - developing a Christian understanding of and respect for other cultures through an emphasis on liberty and justice.

Department Mission Statement

Our program excels in developing highly-skilled and professional graduates who are ready to impact their local and global communities by improving the lives of those they serve. Christian faculty and staff are invested in providing an unparalleled experience utilizing a comprehensive curriculum, contemporary technology, and state-of-the-art facilities to engage students in reaching their full potential, both educationally and spiritually. As a result, our students exemplify ethical leadership, critical thinking, and interprofessional collaboration to support top of the license practice.

[Catalog Description](#)

Normal anatomy and physiology of speech and language will be presented. Specific breakdowns in anatomical and physiological functioning resulting in communication disorders will be discussed.

Integration of Faith and Learning Statement

There is nothing that convinces me more of God's sovereignty over this fallen world than learning more and more about His masterpiece – the human body. You are an absolute miracle – the workmanship of His almighty hand. You are a living, breathing, walking “study aid” for this course. If you have negative preconceived notions about this course, let go of them.

Prerequisites

BIOL 1200 is a prerequisite for this course (Human Structure & Function)

Course Rationale

This course is designed to provide the undergraduate student in communication sciences and disorders with a functional knowledge of the anatomy and physiology of speech and language

production. Attention is given to the specific structures, muscles, and function of respiration, phonation, resonance, and articulation. An overview of the central and peripheral nervous systems is provided. By the conclusion of this course students are expected to know the location and function of the primary structures and muscles of the speech/language mechanism as well as understand how these structures function to produce speech, language, cognition, and swallowing.

Course Materials

Required Materials: Seikel, J. A., Drumright, D. G. & Hudock, D.J. (2019). *Anatomy and Physiology for Speech, Language, and Hearing* (6th ed.). Plural. ISBN 978-1635502794

Strongly suggested: McFarland, D. (2015). *Netter's Atlas of Anatomy for Speech, Swallowing and Hearing* (2nd ed.). Mosby/Elsevier Press. ISBN 978-0323239820

Textbook Rationale

I know that textbooks represent a significant cost for the college student. In this course, you will utilize the required text heavily and it is an excellent resource for you as you enter graduate school and build a professional library. This book contains excellent photographs, illustrations, and diagrams of the human body which are very helpful in mastering this course content, which is visual in nature.

You may opt in for HU Access to the textbook for this semester only, you may purchase your book from the HU Bookstore, directly from the publisher, or from [Amazon](#). A link to an online version of your text is available on the Canvas course.

Learning Objectives

University Learning Outcomes (ULOs)

This course supports mastery of the following ULOs:

ULO 4 (Critical Thinking): Students will gather and evaluate available information and make a reasoned argument based on that data.

ULO 9 (Personal Wellness): Students will demonstrate knowledge and skills for nurturing physical and emotional health.

Relationship to ASHA Standards:

ASHA upholds eight [Standards](#) related to academic and clinical training as well as continuing education, acquisition and maintenance of your CCCs. These Standards have been recently revised and new standards became effective January 1, 2020. The revised Standards are available in your departmental handbook and students are encouraged to review them. This course primarily contributes to evidence of skills described in Standards IV-B, IV-C and IV-D.

Program Learning Outcomes (PLOs)

PLO #3 – Students will demonstrate basic knowledge of human anatomy & physiology supporting speech, language, voice and swallowing.

PLO #11 – Students will demonstrate proficiency in speech and hearing science

Course Learning Objectives (CLOs)

Upon completion of this course, you will be able to:

1. Use common directional terms to describe anatomical structures for speech, voice and swallowing in their relationship to each other and other parts of the body
2. Be able to list cranial nerves and describe their basic functions
3. Describe the organization and function of central and peripheral nervous systems
4. Match disorders of speech, language and cognition with corresponding sites of lesion
5. Describe origin, insertion, action and innervation of musculature for speech, voice and swallowing
6. Construct models of larynx and brain, identifying key structures and demonstrating an understanding of their role in communication
7. Describe basic physiology governing cognition, language, phonation, respiration, articulation, resonance and swallowing
8. Discuss the Bernoulli principle and Boyle's law as they relate to phonation and respiration

Grading and Assignment Details

Grading Information

You will be given feedback during the duration of this course. Feedback will primarily be in the form of grades on quizzes, exams and projects. The intent of this feedback is to inform you of how well you met the expectations for these components and help you identify strategies for mastering the course material.

Assessment of the knowledge, skills, and proficiency of each student for the purpose of assigning a letter grade at the completion of this course will be based on the following course components:

Chapter Exams -	50%
Exam #1 – Neurology & Basics of A&P	
Exam #2 – Respiration	
Exam #3 – Phonation	
Exam #4 - Articulation/Resonance	
Final Exam (Comprehensive)	20%
Quizzes – there are 12	10%
Class Projects	20%
• Clay brain	
• Clay larynx	
• Respiration t-shirt	

Grade schedule:	A- 90-100
	B- 80-89
	C- 70-79
	D- 60-69
	F- less than 60

Grades are not gifts; they are earned. The instructor does not *GIVE* grades; rather the student *EARN*S the grade through organization, diligence, planning, and execution. Students are expected to assume individual responsibility for the quality, presentation and timeliness of their own work. Late work is not accepted and earns a grade of zero. Extra credit

opportunities are generally not available. I do not provide any opportunities to raise your grade at the end of the semester and don't round overall course grades. Take home message: Do your best work on time.

Course Assignment Details

This course is divided into sections. Each section will cover the structure (anatomy) and function (physiology) of each body system. Specific breakdowns in anatomical and physiological functioning resulting in communication disorders will be discussed. The systems covered in this course include:

- 1) Basics of Anatomy & Physiology
- 2) Neurology
- 3) Respiration
- 4) Phonation
- 5) Articulation & Resonance

Each of the five systems above is represented by a module in Canvas. Each module contains pre-recorded Echo Lectures which you listen to. You should also plan to read the corresponding chapters in your textbook. Each module will contain at least two quizzes and you can take them multiple times. Canvas will record the highest grade on each quiz at the time that the quiz closes.

Course Requirements- (must be completed to earn credit in this course):

1. There will be four examinations and a final. The final will be comprehensive.
2. Each student will make a three-dimensional model of a the left cerebral hemisphere and the larynx. Clay (Model Magic) is available at WalMart, Hobby Lobby, or online. Play-Dough is not recommended; it falls apart when dry and you will be sad. Your larynx model should be able to stand on its own. You'll also complete a t-shirt depicting the muscles of the respiratory system. You should plan to turn these in at class time on the day they are due. In case of an online situation, the projects will be photographed and videoed for submission in Canvas for grading. Examples of work submitted in previous semesters are available on Canvas. Rubrics for each project and "helpful hints" are available on Canvas and should be referenced prior to project completion.
3. Each chapter will have at least one accompanying quiz on Canvas. You will have multiple opportunities to take each quiz. It is possible that you can earn a perfect score in this part of the course but that will require diligence on your part.

Participation/Attendance

Full participation in each class meeting is required for the success of the entire class. True exchange of academic ideas can only be achieved with everyone actively participating. Attendance at each in person or synchronous online class meeting is expected. If online, please be prepared to share your screen and verbally participate in discussions. Come to class having read the material, viewed the accompanying Echo Lectures and have your questions ready. Anatomy involves some complex concepts and large amounts of material that is probably new to you. I truly want you to be successful in mastering this course material but cannot answer questions that you don't ask. In my classroom, there are no "dumb" questions. I will always respect your willingness to seek a greater depth of knowledge and promise to never knowingly make a student feel "silly" for asking a question in class – it's a safe place to pursue knowledge.

Please make sure that you maintain that sense of safety by honoring your classmates' pursuit of knowledge.

Should you need to miss class due to illness or quarantine, please communicate with me prior to class time via email. Attendance will be taken at each class meeting. If you need to miss a class period, please inform me via email prior to the class period. Any student who misses more than 2 class meetings will have the final grade lowered by one letter for each subsequent absence.

Attendance Policy: [Harding University Attendance Policy](#)

Submitting Assignments

Please use Canvas for submitting assignments; each assignment has a correlating spot for submission. Name your file in a way that identifies you and the project you're submitting. An example might be Meeker Larynx or Meeker Brain. If your file is too large to upload to Canvas, use Google Drive. Please follow up on your submission with an email to me, alerting me to look for it.

Policies and Procedures

University Policies

Drop and Add Dates

The official start date is August 22 and the last day to add this class is August 26. The course will end on December 16 and the last day to drop is November 30. Please refer to the University's [policy regarding drop/add](#) if you have specific questions.

University Assessment

Harding University, since its charter in 1924, has been strongly committed to providing the best resources and environment for the teaching-learning process. The board, administration, faculty, and staff are wholeheartedly committed to full compliance with all Criteria of Accreditation of the Higher Learning Commission as well as standards of many discipline-specific specialty accrediting agencies. The university values continuous, rigorous assessment at every level for its potential to improve student learning and achievement and for its centrality in fulfilling the stated mission of Harding. Thus, a comprehensive assessment program has been developed that includes both the academic units and the administrative and educational support units. Course-specific student learning outcomes contribute to student achievement of program-specific learning outcomes that support student achievement of holistic university learning outcomes. All academic units design annual assessment plans centered on measuring student achievement of program learning outcomes used to sequentially improve teaching and learning processes. Additionally, a holistic assessment of student achievement of university learning outcomes is coordinated by the university Director of Assessment used to spur continuous improvement of teaching and learning.

Students with Disabilities Accommodations

It is the policy for Harding University to accommodate students with disabilities, pursuant to federal and state law. Therefore, any student with a *documented disability* condition (e.g. physical, learning, or psychological) who needs to arrange reasonable accommodations must

contact the instructor and the Office of Disability Services and Educational Access at the *beginning* of each semester. If the diagnosis of the disability occurs during the academic year, the student must self-identify with the Office of Disability Services and Educational Access *as soon as possible* in order to get academic accommodations in place for the remainder of the semester. The Office of Disability Services and Educational Access is located in Room 226 in the Student Center, telephone, (501) 279-4019.

The Office of Disability Services and Educational Access is located on the Searcy campus. If a student needs the resources of this office, the student must self-identify with the instructor of the course and submit documentation in person, by fax (501-279-5702) or mail (915 E. Market Ave., Box 12268, Searcy, AR 72149-5615) to the Office of Disability Services and Educational Access on the Searcy campus. The [necessary forms](#) are available on the website for that office. Upon receiving the appropriate documentation approved by ADA guidelines, academic accommodations may be set up by the instructor via conference with the Director of Disability Services and Educational Access. If you have questions, please contact the Office of Disability Services and Educational Access at DisabilityServices@harding.edu or (501) 279-4019.

Code of Academic Conduct

Students of Harding University are expected to be honorable and to observe standards of academic conduct appropriate to a community of Christian scholars. Harding University expects from its students a higher standard of conduct than the minimum required to avoid discipline. Harding expects its students to conduct themselves as responsible citizens in a Christian community. Enrollment at the University is viewed as a privilege that brings the attendant responsibilities and accountability. In order to encourage Christian living and growth, the University administers a student Code of Conduct. This code is provided to every student upon enrollment. Upon registration to the University, students acknowledge and agree to abide by this code. Harding University reserves the right to refuse admission or dismiss students whose lifestyle is not consistent with the Christian principles for which Harding stands; and when the general welfare of the institution requires such action. Students suspended for disciplinary reasons during a semester may receive a grade of “F” in all courses for that semester. Please visit the appropriate Harding University Student Handbook ([undergraduate](#) or [graduate/professional](#)) for further details.

Academic Integrity Policy

The goal of academic integrity is to achieve the highest level of integrity without need to invoke procedures or sanctions. To approach that goal, faculty must communicate forthrightly and persuasively to students the importance of academic honesty. Please plan to spend at least a few minutes of your first class meeting each semester enunciating the basic principles you expect to see enacted, and please reinforce this message in your syllabus. A simple statement such as one of the following would suffice:

Honesty and integrity are characteristics that should describe each one of us as servants of Jesus Christ. As your instructor, I pledge that I will strive for honesty and integrity in how I handle the content of this course and in how I interact with each of you. I ask that you join me in pledging to do the same.

Academic dishonesty will result in penalties up to and including dismissal from the class with a failing grade and will be reported to the Director of Academic Affairs. All instances of

dishonesty will be handled according to the procedures delineated in the [Harding University catalog](#).

Chapter quizzes will benefit you most if they're done independently, although comparing answers with a peer after you've taken the quiz is acceptable. It's acceptable to work alongside a peer when completing projects, although each student should complete his/her own project. Examinations should be done individually and not discussed with peers afterwards.

Referencing Information

As the accepted writing style of business, psychology, education, and social science programs across the globe, the American Psychological Association publication format (otherwise known as APA Style) is the required writing style for this course. Learning to conduct scholarly research is a natural part of academic work, and will help you succeed at Harding University. Conducting scholarly, professional and industry research is required for this course.

If a source is questionable, e.g., Wikipedia, other wikis, ask.com, answers.yahoo.com, etc., please contact your professor for clarity and permission before using a source that falls outside the scope of traditional academic standards. It is also important that you show how these references assisted your academic work; so make sure you reference your sources in every assignment you submit, no matter how mundane the assignment may be. Failure to properly and completely cite your sources may constitute plagiarism or cheating, as delineated in the Academic Code of Conduct. Bottom line, remember these two simple rules: 1) give credit where credit is due, and 2) if it isn't your words, ideas or thoughts, it is someone else's and needs to be cited.

- [APA Resources](#)
- [Purdue Online Writing Lab](#)

The Harding University Writing Center is also available to provide help with planning, writing, organizing, or revising an essay as well as with using MLA, Chicago, or APA formats. You can schedule an appointment with the Writing Center at harding.mywconline.com or ask questions via email at HardingUniversityWritingCenter@gmail.com.

Student Declaration

Submitting an electronic document at Harding University constitutes an agreement with the following declaration:

- I affirm that the work submitted is of my own accord, is original, and contains the necessary and appropriate citations, where the work is of another source.
- I affirm that this assignment has not previously been submitted in any form.
- When submitting assignments to Turnitin, I acknowledge and adhere to its disclaimer statements.
- To uphold Harding University's [Academic Integrity Covenant](#)

Academic Grievance Policy

If a student believes that he or she has reason to question the decision of a faculty member with regard to the final grade received in a course or the denial of academic progression, a procedure has been established to resolve the grievance.

The student must initiate the written Academic Grievance Appeal within five business days after notification of the final grade in Pipeline or notification of denial of academic progression. In cases of both course grade and academic progression appeals, students are encouraged to first engage the involved faculty member in a good faith discussion (in person or via telephone or email) as the first step in resolving any concerns. If resolution is not achieved, a student may submit a written academic grievance by following the [policy set forth in the Harding University catalog](#). All students should be familiar with this policy.

Time Management Expectations

For every course credit hour, the typical student should expect to spend at least forty-five clock hours of concentrated attention on course-related work, including but not limited to time attending class, as well as out-of-class time spent reading, reviewing, organizing notes, preparing for upcoming quizzes/exams, problem solving, developing and completing projects, and other activities that enhance learning. **Thus, for a three-hour course, a typical student should expect to spend at least one hundred thirty-five hours dedicated to the course.**

Dress Code

You must adhere to the [dress code](#) for all work done in a course, where either a static or video image of yourself is submitted. Students coming to class out of dress code will be asked to leave and an unexcused absence will be recorded.

Course Policies

Course Academic Conduct

All acts of dishonesty in any academic work constitute academic misconduct. As a student of Harding University, you should avoid all cases that will be construed as academic misconduct. Please see the [University Catalog](#) with any question about what constitutes academic misconduct.

Canvas or Internet Outage Policy

As a (potential online) learner, you must be able to manage technical difficulties such as power outages, connection problems, and other technical issues. Technology will sometimes fail. For this reason, it is advisable to complete your assigned work prior to the due date.

Student

If you experience power outage, Internet service outage, LMS (Canvas) or other technical issues, nonetheless you are held responsible for completing your assigned work in a timely manner. Harding University is not responsible for the student's access to a working computer or reliable Internet service. Internet outage or having computer issues is not an excuse for late work. A backup plan for reliable Internet service and working computer is prudent.

Inclement Weather

If inclement weather prohibits your participation in any element of this course, prompt communication with me is expected. Your personal safety is my primary concern. We will handle any instances that arise on a case by case basis.

Academic Support Services

Harding offers a wide variety of academic support services. While this list is not all-inclusive, the following links may be useful to students (some services may not be applicable for graduate or professional students):

- [Library](#)
- [Testing](#)
- [Tutoring](#)
- [Writing Center](#)

Student Support Services

Harding offers a wide variety of student support services. While this list is not all-inclusive, the following links may be useful to students (some services may not be applicable for graduate or professional students):

- [Advising](#)
- [Registration](#)
- [Financial Aid](#)
- [Student Life](#)
- [Counseling](#)
- [Career Services](#)

Additional Information

There is a tremendous amount of information in your text – we can't possibly master ALL of it in 16 weeks. Pay attention to the quizzes – they will help guide you toward the information that I consider important in this course.

This course is additive in nature meaning that your understanding of future concepts is built upon understanding of earlier concepts. If you fall behind, catch up! If you're lost, ask yourself if you are dedicating enough time to the material. If you are reading your textbook, watching the Echo lectures, spending adequate time with the material (according to the time expectations) and are still lost, see me (earlier rather than later). I want to help you be successful in this class.

In this course, spelling counts. Take the time to learn the correct spelling of each term – if it's spelled wrong, it will be counted wrong. Basic anatomical terms and names of structures do not require capitalization (e.g. esophagus, neurons, larynx, palatoglossus). Structures/diseases named for people (e.g. Broca's area, Parkinson disease, Alzheimer's disease, circle of Willis) are capitalized.

Do yourself a favor and "crack the code" of anatomy early in this course. Learn the basic anatomical terms presented in the first chapter and you'll have an easier time later. The first anatomists were Greeks, thus many Greek (and Latin) terms form the basis for anatomical terminology. Your book does a great job of highlighting this in the margins – pay attention.

I am a firm believer that excellent treatment is built on a solid diagnostic foundation which is built on a clear understanding of what's "normal." You can't reasonably expect to improve your patient's function if you can't identify the problem. Please view this course as foundational (not optional) for your skills as a diagnostician and clinician.

Tutoring is available in the Center for Student Success – it is a wonderful resource and totally free. Please use it, even if you don't think you need it. Many students find it helpful just to talk with another CSD student about the material in the class.

Please take advantage of Office Hours. Office Hours represent time that I dedicate to you, my student, to support you in this class. My schedule varies significantly over the course of the

week and from one week to the next, but any time you want to connect with me about course content outside of class time, just let me know.

Changes to Syllabus Notice

The instructor reserves the right to modify and update any part of the syllabus where necessary. You can expect that these changes will be for your perceived benefit and will be communicated in Canvas. It is your responsibility to stay up to date with any changes communicated by the professor.

	Topic	Ch	Due/Activity
Aug 23	Overview/Introductions	1	
Aug 25	Basic Elements	1	Syllabus Quiz & Chapter 1 Quiz; Workbook pp 5-8
Aug 30	Neuroanatomy	11/12	Workbook pages 19, 21, 26, 30 & 32
Sept 1	Neuroanatomy		Chapter 11a Quiz
Sept 6	Neuroanatomy		
Sept 8	Neuroanatomy		Chapter 11b Quiz
Sept 13	Neurophysiology		Chapter 11c Quiz
Sept 15	Neurophysiology		Clay Brains due
Sept 20	Neurophysiology		Chapter 12 Quiz
Sept 22	Neurophysiology		
Sept 27	Respiration	2/3	Exam #1 9/28
Sept 29	Respiration		Workbook pages 69, 75 & 76
Oct 4	Respiration		Ch. 2 Quiz Workbook pages 80-85
Oct 6	Respiration		Workbook pages 86-89
Oct 10			Tracheostomy lab with Nursing – 3:00 – 4:00 (Freeman Center)
Oct 11	Respiration		Midterm Week; Respiration t-shirt due
Oct 13	Respiration		Chapter 3 Quiz; No class due to ArkSHA in LR
Oct 18	Phonation	4/5	Exam #2 10/19
Oct 20	Phonation		Workbook pages 98-100
Oct 24			Enteral Feeding lab with Nursing – 3:00 – 4:00 (Freeman Center)
Oct 25	Phonation		Workbook pages 103, 106-107, 109, 111
Oct 27	Phonation		Chapter 4 Quiz; workbook pages 125, 129, 131
Nov 1	Phonation		Clay larynx due – see Canvas
Nov 3	Phonation		Chapter 5 Quiz
Nov 8	Phonation	6/7	Workbook pages 134-149
Nov 10	Artic/Resonance		Exam #3 11/11
Nov 15	Artic/Resonance		Chapter 6 Quiz; Workbook pages 153, 157, 165, 167
Nov 17	Artic/Resonance		No class – ASHA Convention
Nov 29	Artic/Resonance		Workbook pages 169, 173, 176, 181, 210-211
Dec 1	Artic/Resonance		Chapter 7 Quiz; Exam #4 12/3
Dec 6	Course Review		Workbook pages 187, 189, 193
Dec 8	Course Review		Workbook pages 194-209
Dec 12-16	Final Exam Week		Final Exam given Wednesday 10:30 – 12:30

