ASLP 3030- Speech and Hearing Sciences

**Welcome to ALSP 3030 Speech and Hearing Sciences!**

**General Information**

**Academic term:** Fall Semester 2025 (August 18th, 2025, to December 12th, 2025)

**Class Meetings**: Tuesday and Thursdays 9:30AM to 10:50 AM

**Room:** Terrill Hall room 120 (1611 W Mulberry St, Denton, TX 76201)

**Instructor Information**

**Instructor:** Olivia Zant, Au.D, Ph.D. (she/her/hers)

**Office**: Speech and Hearing Center, Room 180 (downstairs, middle hallway)

**Email:** Olivia.zant@unt.edu

**Office Hours:** Tuesdays/Thursdays 2:15-3:15 or email me to find a mutually agreeable time to meet over Zoom or in person.

**Communication**- Please note that I typically respond to emails during regular weekday hours. While you are welcome to remail me at any time, response may be delayed on weekends and holidays. I try to respond within 48 hours, depending on the circumstances.

**Course Description:** In this course you will learn about the fundamentals processes underlying the production and perception of speech, and the physical and psychological aspects of sound and their measurement. This course is designed to support students aspiring to careers or continued education in the field of speech-language pathology and audiology.

**Course Structure:** This course will be conducted via in-person lectures and labs.

**Course Prerequisites:** ASLP 2015, ASLP 2020, MATH 1681 (or equivalent), BIOL 1112 (or equivalent), PHYS 1315 (or equivalent)

**Technology Skills and Requirements:** Students enrolled in this course will need to have weekly access to an internet-enabled computer to download and upload files, participate in optional discussion boards, send and receive emails, and access Canvas. To help you learn how to navigate Canvas, please review The Basics for Students New to Canvas (<https://online.unt.edu/canvas-basics-unt-students>). After reviewing this information, please contact the Student Hep Desk for additional technical support Sage Hall 130, 940-565-2324, heldesk@unt.edu.

Access and basic proficiency in navigating Microsoft Office Applications, such as Word is also expected.

Students are required to have a basic calculator for examinations. Calculators must be standalone devices, not part of a phone, table, smartwatch, or computer.

**Course Objectives**

Students in this course will be able to:

1. Define and describe the basic physical properties of sound waves and the instrumental methods used to visualize acoustic information.
2. Identify, label, and describe anatomy and physiology of the speech production and hearing mechanisms (e.g. structures and function of the laryngeal, respiratory, phonatory, articulatory and resonance systems and structures and function of the outer, middle, and inner ear systems).
3. Explain the fundamental concepts of acoustic analysis, including both spectral and temporal dimensions.
4. Identify the acoustic and spectral properties of American English vowels, consonants, and suprasegmental cues.
5. Understand foundational concepts of speech production and perception.
6. Describe clinical application of acoustic, physiological, and perceptual speech analyses.

Specific objectives for each of the 10 modules are provided in the overview section of each separate module.

**Recommended Material**

**Textbook Information:**

Ferrand, Carole (2023). Speech Science: An Integrated Approach to Theory and Clinical Practice, 4th Edition. New York, NY: Pearson (ISBN 9780134508511)

Lass, Norman & Donai, Jeremy (2023). Hearing Science Fundamentals- 2nd Edition. Plural Publishing, Inc. (ISBN13: 978-1-63550-328-9)

Ryalls, J & Susan Behrens (2000 )Introduction to Speech Science From Basic Theories to Clinical Applications, 1st Edition. New York, NY: Pearson. (ISBN 10: 0205291007 )



\*Note: There is a first edition of the Hearing Science Fundamentals. While it still provides very good information, the newer edition has 9 additional chapters. Know that if you purchase the first edition, you take the risk of missing information necessary for learning outcomes.

**Supplementary Materials**

Supplementary materials, including additional texts, videos, and practice questions may be posted on Canvas to aid students in studying material. Supplementary materials are NOT required, but students may find reviewing them helpful for the course.

**Student Accommodations**

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time, however, ODA notices of reasonable accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information, refer to the Office of Disability Access website at https://studentaffairs.unt.edu/office-disability-access. You may also contact ODA by phone at (940) 565-4323.

**Grading Policies**

The table below provides the percentage points necessary to earn each associated letter grade for this course. Point values for each assignment and exam are provided in the Grading Policy table below. Late and/or absent assignments will receive 0 points. If the student ears a final grade of less than (C), the student will be judged as not having made sufficient progress in successfully addressing the Knowledge and Skills Acquisition outcomes for this course.

**Grading Distribution**

|  |  |
| --- | --- |
| A | 90-100% |
| B | 80-89% |
| C  | 70-79% |
| D | 60-69% |
| F | <60% |

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| --- | --- |
| **Course Break-Down** | **Points** |
| In-class Activity Assignments  | 80 points (10 points each) |
| Praat Lab | 30 points |
| Exam 1  | 50 points |
| Exam 2  | 50 points |
| Exam 3  | 50 points |
| Final Project  | 50 points |
| Attendance Assignments/Participation  |  40 points |
| **Total** | **350** |

1. In-class activity assignments: Students will complete in-class activities that correspond with lectures and modules. Activities will be open-book, and the number of questions will vary per assignment. It is recommended that students turn their assignments in on the day of class; however, if the student has an excused absence, the assignment is due by 9:30 AM (start of class) on the following lecture date.
2. Praat Lab: Students will complete an in-class lab using Praat to answer a variety of questions related to speech and hearing science.
3. Exams: There will be three exams throughout the semester. Exam 1 will cover modules 1-5. Exam 2 will cover modules 5-8; and Exam 3 will be cumulative.
4. Final project: You will be given a fictional patient and will put together potential measures and results based on what you have read in the literature and learned in class. This will be an opportunity to put it all together (respirations, phonation, articulation, and hearing). You will do this in groups of 4-6 students.
5. Attendance Assignment/Participation: To encourage active participation and attendance, there will be **9** attendance assignments throughout the remainder of the semester. These assignments will consist of a couple of questions based on the day's lecture, and you will be required to submit your responses by the end of class.
	1. Grading Policy: Only 8 of the 9 assignments will count towards your final grade. This allows you to miss or skip one assignment without penalty.
	2. Missed Assignments: There are no make-ups for missed attendance assignments, unless you have an excused absence (see attendance policy). The free assignment drop is designed to accommodate unforeseen absences
	3. Attendance and participation will be based on the submission of in-class activity assignments, attendance assignments, communication, and effort. Neglecting to turn in assignments without communicating with the instructor, missing class, failing to return communication with the professor, and/or making low effort on assignments loses points.

**Attendance and Participation Policy**

***Class attendance and participation are imperative for your success in this course.*** Attendance is mandatory and students should strive to attend every class unless you have a university-excused absence such as active military service, religious holiday, medical absence, ODA accommodation, or an official university function, as stated in the Student Attendance and Authorized Absences Policy.

**Excused Absences:**

Per UNT’s Attendance Policy “A student is responsible for requesting an excused absence in writing, providing satisfactory evidence to the faculty member to substantiate excused absence and delivering the request personally to the faculty member assigned to the course forwhich the student will be absent”.

A student must reach out to the professor prior to the class to initiate an excused absence.

* Absences due to medical reasons will only be excused with a valid doctor's note, which must be submitted no later than one week after the missed class.- Please note, students are still expected to communicate with the professor PRIOR to missing class for the absence to be counted as excused. The doctor’s note, however, may be sent within the week.
	+ There are no longer specific COVID policies. If you contract COVID-19 or any other illness, it will be treated as a regular illness under the attendance policy.
* The note must clearly indicate that you were advised not to attend class on the specific date(s) of absence.
* Other excused absences (e.g., family emergencies, university-sanctioned events) may require appropriate documentation, at the discretion of the instructor.

Unexcused absences or failure to provide documentation may result in a deduction of participation points and could affect your final grade.

Due to importance of your attendance and participation, it is part of the course grade. Attendance and participation will be judged based on completion of in-class activities, attendance assignments, quality of work, and appropriate communication with the professor or TA when warranted.

**Incomplete Policy**

Students are expected to complete assignments on time and to abide by the attendance policy established for the course. If you know that you will not be able to complete tasks by their assigned due date, it is essential that you communicate that with the professor or the teaching assistant **prior** to the due date so that you, the professor, and the teaching assistant can discuss and mitigate the impact of the absence on your attainment of course learning goals. Failure to communicate with the professor or teaching assistant prior the submission date will result in a zero for that assignment. Please inform the professor or the teaching assistant if you are unable to complete class assignments because you are ill, in mindfulness of the health and safety of everyone in our community. In addition, this class utilizes many in-class activities. If you know you will not be in attendance in class, please communicate with the professor or TA PRIOR to the start of class.

Make-up exams will not be given without a written medical excuse or equivalent (at the instructor’s discretion).

**Academic Integrity Policy**

According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty

occurs when students engage in behaviors including, but not limited to cheating,

fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A

finding of academic dishonesty may result in a range of academic penalties or sanctions

ranging from admonition to expulsion from the University.

Every student in my class can improve by doing their own work and trying their hardest with access to appropriate resources. Students who use other people’s work without citations will be violating UNT’s Academic Integrity Policy. Please read and follow this important set of [guidelines for your academic success](https://policy.unt.edu/policy/06-003) (https://policy.unt.edu/policy/06-003). If you have questions about this, or any UNT policy, please email me or come discuss this with me during my office hours.

**Use of Artificial Intelligence for Assignments**: According to the UNT Academic Integrity Policy ([UNT Policy 6.003](https://policy.unt.edu/sites/default/files/06.003%20Student%20Academic%20Integrity.pdf)), any form of "unauthorized assistance" constitutes cheating. As a result, use of any artificial intelligence is not authorized for assignments in this course.

**Emergency Notification & Procedures:** UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to the UNT Learning Management System (LMS) for contingency plans for covering course materials.

**Acceptable Student Behavior:** Student behavior that interferes with an instructor’s ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc. The Code of Stud

**Student Evaluation Administration Dates:** Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the SPOT website at spot.unt.edu or email spot@unt.edu.

**Changes in syllabus:** The syllabus for this course is tentative to change in response to the professor’s schedule, needs of the students, and the availability of guest speakers. Students are responsible for any syllabus change announced in class or communicated via email or printed form.

**Course Schedule**

\*Note: The course schedule is tentative and might change as the course requires.

**Specific module objectives are listed in Canvas on each module introduction page.**

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| **Introduction** |
| **Module 1: Basic Acoustics** |
| **Module 2: Measuring Sound** |
| **Module 3: Structure and Function** |
| **Module 4: Psychoacoustics** |
| **Exam 1** |
| **Module 5: Respiration** |
| **Module 6: Phonation** |
| **Module 7: Articulation and Resonance** |
| **Module 8: Speech Production** |
| **Exam 2** |
| **Module 8: Measures of Speech** |
| **Module 9: Speech Perception** |
| **Module 10: Introduction to Praat** |
| **Exam 3** |

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| **Date** | **Lecture Topic** | **Notes** |
| August 19th | Introduction | * Syllabus
* Introduction and course expectations
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| August 21st  | Basic Acoustics (Part 1) | Chapter 1 in *Hearing Science Fundamentals* Text |
| August 26th  | Basic Acoustics (Part 2) |  Chapter 1 in *Hearing Science Fundamentals* Text |
| August 28th | Measuring Sound (Part 1) | See Canvas for reading/videosHave a nice Labor Day weekend! |
| September 2nd  | Measuring Sound (Part 2) | See Canvas for reading/videos |
| September 4th  | Review Day | * Catch-up on lectures (if needed).
* In-class activity
* Begin next lecture (if time warrants)
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| September 9th  | Structure and Function of the Auditory System: Outer and middle ear | Chapter 4 in *Hearing Science Fundamentals* Text |
| September 11th  | Structure and Function of the Auditory System: Inner ear | Chapter 5 in *Hearing Science Fundamentals* Text |
| September 16th  | Structure and Function of the Auditory System: CANS | Chapter 6 in *Hearing Science Fundamentals*  |
| September 18th  | Binaural Processing and Masking | Chapter 8 and 9 in *Hearing Science Fundamentals* Text |
| September 23rd  | Loudness and Pitch | Chapter 11 and 12 in *Hearing Science Fundamentals* Text |
| September 25th  | Review Day | * Catch-up on lectures (if needed).
* In-class activity
 |
| September 30th |  Exam 1 | Please bring multiple writing utensils and standalone calculator. The examination begins promptly at 9:30 AM. |
| October 2nd  | Respiration | Chapter 3 in Introduction to Speech Science Text |
| October 7th  | Phonation | Chapter 4 in Introduction to Speech Science |
| October 9th  | Articulation and Resonance: | Chapters 5 and 6 in Introduction to Speech Science Text |
| October 14th  | Articulation and Resonance  | Chapters 5 and 6 in Introduction to Speech Science Text |
| October 16th  | Speech Production | See Canvas for readings and videos |
| October 21st  | Speech Production  | Chapter 8 Introduction to Speech Science Text |
| October 23rd  | Speech Production | See Canvas for additional text |
| October 28th  | Review Day | * Catch-up on lectures (if needed).
* Review concepts
* In-class activity.
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| October 30th  | Exam 2 | Please bring multiple writing utensils and standalone calculator. The examination begins promptly at 9:30 AM. |
| November 4th  | Measures of Speech | See Canvas for readings and videos |
| November 6th  | Speech Perception  | Chapter 12 in *Introduction to Speech Science* Text |
| November 11th  | Clinical Applications of Speech Perception | See Canvas for reading and videos |
| November 13th  |  Introduction to Praat | In-class activity. Please bring laptops and writing utensils.  |
| November 18th  | Review | * Catch-up on lectures (if needed).
* Review

Note- Exam 3 will be cumulative |
| November 20th  | Exam 3 | \*IF class is behind on lectures, Exam 3 may be moved to December 2nd  |
| November 25th  | No Class- Fall Break |  |
| November 27th  | No ClassHappy Thanksgiving! |   |
| December 2nd  | Final Lecture/ Special Topics presentation | \*IF class is behind on lectures, Exam 3 may be moved to December 2nd |
| December 4th  | Final Project Due | See the rubric on Canvas |
| Final Exam TBD | Final Project |  |
| December 12th  | Grades Due | Please review grades and email me with any questions or concerns by December 12th, as final grades will be submitted to the university this weekend.  |

