

Department of Audiology and Speech-Language Pathology

ASLP 3030—Speech and Hearing Science

Spring 2020

Class Time: Tuesday/Thursday; 9:30am – 10:50am

Location: WH 316

Instructor: Stephanie D. Ware, Au.D.

E-Mail: Stephanie.Ware@unt.edu

Office Hours: After class and by appointment

TA: Brady Dylla (bradydylla@my.unt.edu)

Course Objective:

This course is designed to provide students with the fundamental processes underlying the production, measurement, and perception of speech, as well as the physical and psychological aspects of sound. Readings, assignments, and classroom discussion will serve to contribute to students’ learning.

Learning Outcomes:

At the end of the course, students should be familiar with:

* The principles of sound
* The physical quantities used to measure and describe sound
* The principles of speech production
* The physical quantities used to measure and describe speech
* The theories of auditory perception
* The application of these principles to the treatment of individuals with speech and hearing disorders

Text:

Required Text: MacKay, I. (2014). Acoustics in Hearing, Speech, and Language Sciences: An Introduction. Pearson. ISBN: 979-0132897082.

Supplemental Text: Yost, W. (2000). Fundamentals of Hearing: An Introduction. Academic Press: London. ISBN: 0-12-775695-7

Course Requirements:

Students must have satisfactory completion of all readings, class assignments, and exams. Students must be present in the classroom for successful completion of in-class assignments. Students will need to bring a **calculator** **with a log function** to class.

Attendance and Classroom Assignments:

Students are expected to attend all class meetings for optimal learning. If absence is due to illness, documentation will need to be provided.

Academic Disruption Policy:

The use of cell phones is prohibited in the classroom. All cell phones and/or alerting devices should be turned off or silenced before entering the classroom. Please arrive on time. If you need to leave early, please sit in one of the aisle seats, leave quietly, and close the door carefully behind you.

Academic Dishonesty:

The faculty expects a high level of responsibility and academic honesty. Any form of academic dishonesty will not be tolerated and will result in formal disciplinary action.

Student E-mail: Your UNT e-mail account will be used for all correspondence. If you choose to use another e-mail service (ex. Gmail, Yahoo), be sure to enable your UNT mail account to forward correspondences.

ODA:

“The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, ODA notices of 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 accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the Office of Disability Accommodation website at http://www.unt.edu/oda. You may also contact them by phone at 940.565.4323.”

Lab Assignments:

Students will be required to complete online lab assignments during the semester via Canvas. A total of eight (8) lab assignments are scheduled. At the end of the semester, the lowest lab grade will be dropped for a total of seven (7) labs. Please note that late lab assignments will not be accepted. It is expected that all work turned in for the course is your own.

Grades:

Grading:

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| --- | --- |
| **Activity** | **Points** |
| Exams (4) | 60 |
| Labs (7) | 35 |
| Attendance | 5 |

Grading Scale:

|  |  |
| --- | --- |
| 90-100% | A |
| 80-89% | B |
| 70-79% | C |
| 60-69% | D |
| 0-59% | F |

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| **DATE** | **TOPICS AND ASSIGNMENTS** | **READING** |
| January 14 | Introduction  Syllabus |  |
| January 16 | The Nature of Sound | Chapter 2 |
| January 21 | The Nature of Sound, Part II | Chapter 3 |
| January 23 | LAB 1 |  |
| January 28 | Complex Waves | Chapter 4 |
| January 30 | LAB 2 |  |
| February 4 | Signals, Analog Signals, and Digitization | Chapter 5 |
| February 6 | EXAM I |  |
| February 11 | Filters | Chapter 9 |
| February 13 | LAB 3 |  |
| February 18 | Spectra + Spectrograms | Chapter 7 |
| February 20 | Resonance | Chapter 10 |
| February 25 | The Respiratory and Phonatory System |  |
| February 27 | LAB 4 |  |
| March 3 | The Articulatory System |  |
| March 5 | EXAM II |  |
| March 10 | SPRING BREAK—No Class |  |
| March 12 | SPRING BREAK –No Class |  |
| March 17 | Source-Filter Theory, Vowel Production | Chapter 11 |
| March 19 | Source-Filter Theory, Consonant Production | Chapter 12 |
| March 24 | Decibels and RMS | Chapter 8 |
| March 26 | LAB 5 |  |
| March 31 | Psychoacoustic Methods | Chapter 13 |
| April 2 | LAB 6 |  |
| April 7 | Auditory Perception | Yost Chapter 14 |
| April 9 | EXAM III |  |
| April 14 | Masking | Chapter 11 |
| April 16 | LAB 7 |  |
| April 21 | Sound Localization and Binaural Hearing | Chapter 13, Yost Chapter 12 |
| April 23 | LAB 8 |  |
| April 28 | Loudness and Pitch | Chapter 13, Yost Chapter 14 |
| April 30 | Review |  |
| May 7 | FINAL EXAM 8:00am – 10:00am |  |

Note:

The syllabus is not a contract and is subject to change. The instructor has the right to make changes to enhance the effectiveness of the course. Students will be notified of all changes at the appropriate time.