Acoustics and Psychoacoustics

SPHS-6313

Spring 2021  Section 01  3 Credits  01/19/2021 to 05/11/2021  Modified 02/03/2021

Meeting Times

| Office Hours: Tuesday 09:00 - 11:00 am / Thursday 01:00 - 04:00 pm |
| Office: SPHS 120M |
| E-Mail: ifelipe@lamar.edu |

Contact Information

Phone: (409) 880-7900

E-Mail: ifelipe@lamar.edu

Catalog Description

The study of acoustics (physics of sound) and psychoacoustics (perception of sound) are covered. The aim of this course is an understanding of the comprehensive physical, physiological, and cognitive issues related to production of sound and listening. Principles and application of acoustics and psychoacoustics as they apply to clinical audiology and communication are provided. Prerequisite: Acceptance into Au. D. program

Objectives

Objective 1: The Auditory Stimulus (Sound): Understand and describe the physical parameters of sound.

Objective 2: Basic Peripheral Auditory Anatomy & Physiology; The Abnormal Auditory System: Describe the process of sound conduction from periphery to central processing. Synthesize understanding of acoustics and apply to biologic processes.

Objective 3: Auditory Perception & Psychoacoustics: Combine understanding of physics and apply it to psychological perception of sound.

Outcomes

The students should be able to:

Objective 1: The Auditory Stimulus (Sound): Understand and describe the physical parameters of sound.

Recall and describe basic concepts and terminology of physical acoustics, including: the basic facts (nature of sound), principles, and methods of sound generation, propagation, processing, measurement and analysis
Describe the physical nature of sound and sound waves (physical variables of sound generation, transmission, and measurement: frequency, amplitude, phase, time, and spectrum; wave propagation, speed, reflection, absorption, refraction, and diffraction; interference; resonance).

Understand calculation of the speed of sound, amounts of acoustic energy, intensity, power, and sound pressure levels

Understand the decibel scale and standard acoustic references; determine differences (in decibels) between different acoustic sound pressure levels or intensities

Describe the concept and relationships of decibels and the various relative measures of acoustic power.

Apply basic concepts of logarithms and antilogarithms as related to sound.

Explain complex sound and Fourier’s theorem.

Have a basic understanding of simple and complex sounds and describe the relationships between time-domain waveforms and resulting frequency spectra

Objective 2: Basic Peripheral Auditory Anatomy & Physiology; The Abnormal Auditory System: Describe the process of sound conduction from periphery to central processing. Synthesize understanding of acoustics and apply to biologic processes.

Identify the major outer, middle and inner ear structures crucial for sound conduction from outside the ear to the sensory cells within the cochlea

Explain the factors involved in efficiently transferring sound energy from low-impedance air to high-impedance inner-ear fluids

Describe passive (and, to a lesser extent, active) cochlear processes/mechanics and neurotransmission underlying frequency representation

Identify the classical central auditory pathways

Explain the biology of hearing related to sound processing and perception (physiological variables of sound reception: peripheral auditory system; critical bands and masking; neural processing; non-linearity of the hearing mechanism).

Objective 3: Auditory Perception & Psychoacoustics: Combine understanding of physics and apply it to psychological perception of sound.

Describe the concepts of psychoacoustics and synthesize the acoustic, biologic, and psychologic processes that lead to perception.

Describe/define the perceptual aspects of sound and sound waves: perceptual attributes of auditory sensation and their physical/physiological correlates: pitch; loudness; duration; timbre; sensory consonance/dissonance; sound - source localization; subjective evaluation of room acoustics.

Formulate learning questions that guide learning about the perceptual characteristics of sounds (including pitch, loudness, and perceived location)

Explain the ability of the auditory system to analyze the auditory input into separate frequency components (frequency selectivity)

Explain the concepts of loudness, pitch, periodicity, and temporal coding

Explain the ability to perceive sounds in the presence of other (extraneous) sounds

Describe the auditory scene

Describe the cognitive aspects of sound (introduction to cognitive variables of sound organization/interpretation, in the context of sound perception).

Conjecture and offer potential solutions through evidence-based research to the unsolved “cocktail party effect”.
Examine a spectrogram and discuss its psychoacoustic principles.

Apply the knowledge of speech acoustics to hearing loss and discuss the benefits and limitations of modern amplification.

Describe the basics of speech and music perception.

## Course Materials

### REQUIRED TEXTS:

**TEXT or E-TEXT:**


### Recommended References:


Additional Readings as assigned: There may be additional readings assigned throughout the course of the semester that will help clarify information covered in class. Should additional readings be assigned, they will either be provided or be placed on Blackboard and instructions given to the class on how to access them.

### Course Policies

**NO MAKEUP ASSIGNMENTS/EXAMINATIONS WILL BE ALLOWED WITHOUT PRIOR APPROVAL AND PROPER DOCUMENTATION.** Please observe the times and due dates set for assignments/examinations in the course schedule. If you believe you will be missing a class day, please advise me prior to request a makeup. In extreme circumstances that prevent you from informing me of an absence prior to the date missed, email me at lfelipe@lamar.edu as soon as possible so that your situation can be evaluated. Makeups will be allowed at the instructor’s discretion. Every effort will be made to return your exams/assignments in a timely manner.

**STUDENTS WITH DISABILITIES:**

It is the policy of Lamar University to accommodate students with special needs, pursuant to federal and state law, and the University’s commitment to equal educational opportunities. Any student with special needs requiring accommodation should notify Mr. Kyle Mutz, Director of the office of Services for Students with Disabilities (SFSWD). Phone: 409-880-8347 or e-mail kyle.mutz@lamar.edu. Students that have been assigned academic adjustments and/or accommodations are required to identify their needs to faculty members by presenting an accommodation memorandum from the SFSWD Director.

**Policies and Rules**

- **Please silence and do not use your cellphone during class.** No texting, checking email, etc. I find it disrespectful to our learning environment and in the interests of our learning community I will enforce this policy. If you continue to use your phone during class, you may be asked to leave class. If cellphone use is needed in the case of emergencies (sick family member, etc.) let me
know prior to class starting. Laptops, tablets, and notebooks are acceptable as long as they are being used for in class note taking and assignments. I will not tolerate social media, web surfing, emails, or unrelated work during class. You will be asked to put the other work or fun aside or leave class. It is not normal to randomly smile/giggle at your lap or at your lecture notes...don’t text/Pinterest/Facebook/etc. in class. [Symbol]

- No pictures or videos during lectures please. I do allow audio recording when asked for permission, preferably written request to my email (lfelipe@lamar.edu). Any use of audio recording other than for studying throughout the course is prohibited without written permission, the same for power point material.
- To be fair to students who complete their work on time, late work will receive a penalty of 10% for each day it is late. Assignments turned in after class time on the day due will be considered one day late.
- Attendance is required; it is expected that you be at all class sessions as this is crucial to your learning of course principles. Graduate level study is your final preparation before entering the profession. As such, attendance is expected. Notices of absences must be provided prior to missed classes. See policy regarding exams/assignments for further information.
- As a student in a doctoral level program of an accredited University, you are required to complete all assigned readings prior to class and participate in class discussions. Students are expected in class to interact with other students, discuss ideas, perform ungraded writing, and similar activities. I will not waste anyone’s time regurgitating your textbook. This is your opportunity to become proficient in knowledge and skill before entering your profession. As such, class participation is expected, as it will aid in your understanding of the presented material.

- Students are expected to treat each other with respect. Disruptive behavior of any kind will not be tolerated. Students who are unable to demonstrate civility with one another or me will be subject to referral to the Office of Student Conduct or to the University Campus Police. You are expected to adhere to the Student Code of Conduct.
- I only send and accept emails through the Lamar University email system. While I appreciate that you may have a more frequently used alternate email address, the University recommends this form of communication. If you feel it is cumbersome to check multiple emails, I suggest that you have your university emails forwarded to your more frequently checked email address. However, make certain that you can reply through your lamar.edu email address.
- Please be professional in your online interactions with your peers and your instructor. In your emails, please identify yourself, your related course, and clearly state your question with the necessary detail. Do not forget your course title or number as I have many students to remember! Please address me as Dr. Felipe or Professor Felipe, not [blank] or “Hey” or “Yo”. I will do my best to respond to your emails as quickly as possible.
- Please submit all assignments via Lamar University email to lfelipe@lamar.edu by the end of class on its due date. However, put the title of the course and the assignment name in your subject heading. I have discovered that I often do not have time to grade such work as soon as I receive it and it subsequently gets lost in the halls of email. That is not in your best interest. Be certain that the information requested above is provided. I also highly recommend that you save your sent emails for proof of time of sending in cases where I may not have received your assignment on its due date caused by forces outside your control (e.g., email was marked as spam, electronic error, etc.).

Academic Honesty: Plagiarism and Cheating

Students are specifically warned against all forms of cheating and plagiarism. The Lamar University Student Handbook clearly reads: “Any student found guilty of academic dishonesty in any phase of academic work will be subjected to disciplinary action. Punishable offenses include, but are not limited to, cheating on an examination or academic work which is to be submitted, plagiarism, collusion, and the abuse of source materials.” One aspect of the Handbook’s definition of cheating includes “purchasing or otherwise acquiring and submitting as one’s own work any research paper or other writing assignment prepared by an individual or firm.” Plagiarism is defined as “the appropriation and the unacknowledged incorporation of another’s work or ideas into one’s own and submitted for credit.” Faculty members at Lamar University investigate all cases of suspected plagiarism. Any student who is found guilty of academic dishonesty in this course may receive an “F” in the course, a zero or F on the assignments, and/or will be reported to the College Dean and the Dean of Students.

NOTE: I do not tolerate cheating or plagiarism. I am patient, kind, and friendly if you ask me questions about potential plagiarism (such as, “is this plagiarism?” or “how do I properly cite this?”). If you do not ask such questions and are caught plagiarizing, I am not so patient, kind, and friendly. I consider cheating and plagiarism disrespectful to the rest of the students who are working hard and taking the risk of turning in their own imperfect work.
This class will fulfill, in whole or in part, the following Standards as required by the American Speech-Language-Hearing Association (ASHA) for Certification of Clinical Competence in Audiology: Standards IV: A3, A6, A11, A12, A23, A29, E2.

**Evaluation**

**COURSE WORKLOAD and GRADING:**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points per assignment</th>
<th>Total points possible</th>
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<tbody>
<tr>
<td>Articles or Exercises (10)</td>
<td>25</td>
<td>250</td>
</tr>
<tr>
<td>Research Paper</td>
<td>100</td>
<td>100</td>
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<tr>
<td>Reports</td>
<td>25</td>
<td>50</td>
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<tr>
<td>Exams</td>
<td>100</td>
<td>200</td>
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<tr>
<td><strong>TOTAL PTS. POSSIBLE</strong></td>
<td><strong>600</strong></td>
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**COURSE GRADING SCALE**

| 90 – 100 % | A | 540 – 600 points |
| 80 – 89 %  | B | 480 – 539 points |
| 70 – 79%   | C | 420 – 479 points |
| 60 – 69%   | D | 420 – 479 points |
| < 60%      | F | 000 – 349 points |

Lamar University is committed to maintaining an atmosphere of intellectual integrity and academic honesty. Students are expected to neither knowingly give nor receive inappropriate assistance in academic work. This goes for homework assignments as well.

**FORMATIVE and SUMMATIVE ASSESSMENTS with rubrics:**

Articles or Exercises (10) – 25 points each, totaling 250 points: Articles or exercises will be used as complementary understanding. As homework, each student will do homework or read the article and will be discuss it in the next class. The exactly days are not available, will be during the classes, according the material. All of them will be delivery in time to provoke a critical discussion about
the subjects. The exercise and articles should be delivered printed, about the article it is important that each student writes a resume about it with critical points and add more information about the subject using more references.

Reports (2) – 25 points each, totaling 100 points: Places and/or invited lectures will happen during classes or if necessary Fridays (the exactly day is not available yet because Dr. Felipe needs to receive the confirmation from each company/space).

The goal is make a bridge with the context in class and outside. At the end of each visit or presentation, the student should deliver a paper about the subject and research literature about it as complementary information.

Research Paper (1) – 100 points each, totaling 100 points: Students will work in groups of 2 in a chosen topic from the list below within the area of acoustics/psychoacoustics (8 topics – it means one student will do more than one topic, but not with the same colleague).

**TOPIC CHOICES:** ☐ Cocktail Party Effect; ☐ Aural Illusions; ☐ Auditory Scene Analysis; ☐ Music Psychology; ☐ Timbre; ☐ Sound Localization; ☐ Dynamic Range of Hearing; ☐ Background Noise Tolerance

Group formation and topic selection are due to the instructor by email ([ffelipe@lamar.edu](mailto:ffelipe@lamar.edu)). Emails should be sent by both members of the group to ensure an agreement has been made. Only one group will be allowed per topic, so topics are first come first serve. If a group member is not contributing to the paper, let Dr. Felipe know ASAP. Papers are due date at Course Schedule. A **MINIMUM** of 5 legitimate sources (scholarly journals, books, etc) is required. With the exception of scholarly/professional associations (e.g., AAA, ASHA, etc.), no Internet sources will be accepted without prior approval. Request such approval by email. The minimum length is four pages and the maximum acceptable length is five pages, **not including** your reference page. Keep your information **concise, direct, and professional**. All papers should be completed in typed 12-point, Times New Roman font, double-spaced with 1-inch margins all around. Current APA format should be used, but a cover sheet is not required and if included should not be part of the page count. If you are uncertain about APA, please visit Lamar’s Writing Center on campus or visit:

[https://owl.english.purdue.edu/owl/section/2/10/](https://owl.english.purdue.edu/owl/section/2/10/).

See the rubric below to understand how the paper is evaluated.

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<th>CONTENT (40)</th>
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<th>Content is clear but (ONE OF THE FOLLOWING):</th>
<th>Most content is clear but (two of the following):</th>
<th>Content is not clear OR (THREE OR MORE OF THE FOLLOWING):</th>
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<td>Relevant facts included; irrelevant facts left out</td>
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Examinations (2) – 100 points each, totaling 200 points: There will be two (2) examinations throughout the semester.

*Rubric for discussion questions on examinations.*

| Content --- 80%/QUESTION | QUESTION IS ADDRESSED PROPERLY WITH RELEVANT FACTS INCLUDED. |
Institutional Policies

Academic Honesty Policy

Lamar University expects all students to engage in academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in their academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action.

The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion, and the abuse of resource materials.

All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include failure of the assignment and/or course up to suspension or expulsion from the university. The penalty may vary by instructor.

Additional information is available on the Academic Policy website (https://students.lamar.edu/academic-support/academic-policies.html).

Course Drop Policy

Students may drop a course and receive a grade of "Q" during the penalty-free period of the semester or session. For drops after this penalty-free period, grades are recorded as "Q" or "F," indicating the student was passing or failing at the time of the drop. A grade of "Q" may not be assigned unless an official drop has been processed through the Records Office. Students may drop a course online up to the census day by logging into Self-Service Banner. After the census day, courses must be dropped through the Records Office. For additional help, contact the academic advisor or the Records Office at registration@lamar.edu. Students may not drop a course during the last 20 percent of the term. Students should check the academic calendar at https://www.lamar.edu/academic-calendar for specific dates.

Students with Disability Policy

Lamar University is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is located in the Communication building, room 105. Office staff collaborate with students who have disabilities to provide and/or arrange reasonable accommodations.

If you have, or think you may have, a disability (e.g. mental health, attentional, learning, chronic health, sensory, or physical), please contact the DRC at 409-880-8347 or drc@lamar.edu to arrange a confidential appointment with the Director of the DRC to explore possible options regarding equitable access and reasonable accommodations.

If you are registered with the DRC and have a current letter requesting reasonable accommodations, we encourage you to contact your instructor early in the semester to review how the accommodations will be applied in the course.

Additional information is available at the DRC website (http://www.lamar.edu/disability-resource-center/).

Academic Support

Academic Support can be located at https://www.lamar.edu/students/#acad-supp.
There are many areas (i.e. Advising, Writing Center, etc.) of academic support. Each area provides their own specific contact information and days and hours of operation.

**Student Services**

*Lamar University* recognizes that students may experience challenges that hinder success in their academics and/or college experience. We believe in giving all students access to resources that allow them to overcome these challenges. If you are struggling with stress, procrastination, anger management, depression, anxiety, substance abuse and/or eating disorders, please reach out to our counseling professionals at the **Student Health Center at 880-8466 to call for an appointment or visit our website https://www.lamar.edu/students/student-engagement/student-health-center/index.html for more information about our services.**

Students who face challenges securing food or housing, tuition and/or books and believes this may affect their performance in the course is urged to contact the **LU Strong program. The program is located in the Setzer Student Center, Room 230 at 409-880-8458 or at lustrong@lamar.edu** Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any additional resources they may possess.

*Your information and situation will be treated with the utmost privacy and is protected by Texas law. These services are available to all currently enrolled students at Lamar University and Lamar Institute of Technology.*

*Information on Student Services can be located at http://students.lamar.edu/index.html. There are many resources (i.e. Course schedules, important phone numbers, etc.) available. Each area provides their own specific contact information and days and hours of operation.*

**Academic Continuity Policy**

In the event of an announced campus closure in excess of four days due to hurricane or other disaster, students are expected to check Lamar University’s website and login to LU Connect for instructions about continuing courses remotely.

**Emergency Procedures**

Many types of emergencies can occur on campus; instructions for severe weather or violence/active shooter, fire, or chemical release can be found at the [Office of Environmental Health/Safety and Risk Management](https://www.lamar.edu/about-lu/administration/risk-management/index.html) webpage.

**Severe Weather**

- Follow the directions of the instructor or emergency personnel.
- Seek shelter in an interior room or hallway on the lowest floor, putting as many walls as possible between you and the outside.
- If you are in a multi-story building and you cannot get to the ground floor, pick a hallway in the center of the building.
- Stay in the center of the room, away from exterior walls, windows, and doors.

**Violence/Active Shooter**

- **CALL** - 7777 from a campus phone (Text 409-241-8002 from a cell phone). Note: Calling 911 from either a campus or cell phone will contact the City of Beaumont dispatch rather than the LU police.
- **AVOID** - If possible, self-evacuate to a safe area outside the building. Follow directions of police officers.
- **DENY** - Barricade the door with desks, chairs, bookcases or any other items. Move to a place inside the room where you are not visible. Turn off the lights and remain quiet. Remain there until told by police it is safe.
- **DEFEND** - Use chairs, desks, cell phones or whatever is immediately available to distract and/or defend yourself and others from attack.

**Copyright Policy Statement**

Copyright is defined as the ownership and control of the intellectual property in original works of authorship which are subject to
copyright law. As an institution of higher learning that values intellectual integrity, Lamar University prohibits the distribution of published materials (print or electronic) in violation of copyright law.

**LU Connect Portal**

Students are asked to obtain a Lamar Electronic Account username and password so they can log onto the LU CONNECT website. Students may get information on how to get into the LU CONNECT website from the University’s homepage (http://www.lamar.edu) by clicking on the LU CONNECT link on the left top corner of the screen. Follow the steps to secure your LU CONNECT username and password.

**LU Learn/Blackboard Learning Management System (LMS)**

Students will utilize the Lamar University’s Learning Management System (LMS), Blackboard, for online courses. For Blackboard technical support go to https://blackboardsupport.lamar.edu.

Phone: 866-585-1738

Phone and chat are available 24/7/365

Exams and quizzes taken within LULearn (Blackboard) may require online proctoring. Lamar University uses Proctorio for online proctoring. For additional information about online proctoring click here (https://www.lamar.edu/lu-online/student-support-services-quick-links/index.html#proctoring-services) and view details under proctoring services.

**Network Use**

**ACCEPTABLE USE**

Students must respect the integrity and security of Lamar University computer systems and network, and the privacy and preferences of other users. Responsibility for learning about and complying with Lamar University Acceptable Use Policy ultimately rests with the individual. The network may be used to download, copy, or store any software, shareware, digital media files or freeware, as long as the use complies with copyright law licensing agreements, and campus policies, such as storage space limitations and network bandwidth restrictions. The network may not be used for any activity, or to transmit any material, that violates United States or local laws.

**UNACCEPTABLE USE**

The network may not be used for commercial purposes. Advertising and sponsorships on Lamar University websites is restricted. In addition, students may not permit other persons to use their usernames, passwords, accounts or disk space, or disclose their usernames, passwords or account information to any third party. Students may not log on to someone else's account, internet address, or other network codes, or attempt to access another user's files. Students may not create false or dummy accounts to impersonate someone else. Students may not try to gain unauthorized access ("hacking") to the files or computer systems of any other person or organization. Students may not impersonate another person by forging e-mail, web pages or other electronic media. Students who maliciously access, alter, delete, damage or destroy any computer system, computer network, computer program, or data will be subject to disciplinary action by Lamar University, and criminal prosecution as well. Students may not disrupt or attempt to disrupt network traffic, and they may not attempt to monitor or capture network traffic in any way. Finally, students may not intentionally create, store, display, print or transmit information that violates the university's Sexual Harassment Policy.

**Netiquette (Online Etiquette) Statement**

Please adhere to the same standards of behavior and professional respect online that you would follow in face-to-face communication with others, but most particularly when writing email and when taking part in collaborative and discussion board activities. Lamar provides access to network resources, including the Internet, in order to support learning and to prepare students for the 21st century world. Students, however, are expected to adhere to the Lamar University Acceptable Use Policies when Using Networks. More comprehensive student code of conduct can be found at https://students.lamar.edu/academic-support/code-of-conduct.html.

**GENERAL GUIDELINES TO RESPECT ALL PARTICIPANTS**

- Respect the right of each person to disagree with others.
- Treat people the same as you would face-to-face.
- Respect the time of others.

GUIDELINES WHEN COMMUNICATING WITH OTHERS (EMAIL, DISCUSSIONS, BLOGGING, AND ETC.)

- Always sign your name to any contribution you choose to make.
- Be constructive in your responses to others in the class.
- Do not use all caps (Doing so may be interpreted as shouting).
- Re-read your postings before sending them.
- Always think before you write.
- Respond respectfully.
- Use appropriate grammar and structure.
- Spell-check your postings.
- Use short paragraphs focused on one idea.
- Use appropriate business language at all times.

Technical Support

Technical Support can be located at http://students.lamar.edu/it-services-and-support/index.html.

Phone: 409-880-2222
Email: servicedesk@lamar.edu

Hours of Operation (CST):
Monday - Thursday 7:30 a.m.-12:00 a.m.
Friday 7:30 a.m. - 7:30 p.m.
Saturday 9:00 a.m. - 6:00 p.m.
Sunday 3:00 p.m. - 12:00 a.m.

Attendance Verification

Students must complete an Attendance Verification Quiz for ALL COURSES - both on-campus and online - in which they are enrolled each term by the third class day to comply with U.S. Department of Education attendance requirements. Failure to complete this quiz by the deadline may result in loss of course enrollment and/or financial aid. The quiz is located in EVERY COURSE through LULearn (Blackboard) even if the course meets on campus.

COVID-19 Requirements

The Lamar community is beginning this semester during a health crisis, which is unprecedented for a university and which has erupted on a massive scale. President Evans has outlined and required the following personal mitigation steps.

- Adhering to social distancing protocols (6 feet)
- Following enhanced personal hygiene practices, including regular handwashing and/or use of hand sanitizing products when soap and water are not readily available
- Self-screening for any signs or symptoms of COVID-19 before coming to campus (or leaving dorm room if a campus resident) and seeking medical care if feeling ill
- Wearing masks or other face coverings inside all buildings at all times except when alone in an office or dorm room

Students taking this class are required to wear masks or face coverings in the classroom at all times. Faculty and students share the same goals during this health crisis; we want success in this course, and we want the campus to remain open. Members of the Lamar community share significant and unrelenting responsibilities. As members of the larger world community, we have not only the opportunity but the duty to develop and to exhibit a sense of social responsibility. Masks protect those people around you, and everyone has to wear a mask for this measure to benefit all of us. During this Coronavirus pandemic, wearing a mask is a sign of mutual respect. The journal Proceedings of the National Academy of Sciences suggests that “among all strategies for reducing transmission, wearing face masks may be the central variable that determines the spread of the virus.”

We are responsible for each other. Each of us has to protect the Lamar family and to remember that we have especially vulnerable populations among us; for example, some students have chronic illnesses or disabilities, some students have children, some students are older, and some faculty are older. Our individual choices are of the utmost importance. The university has confidence that all students will recognize their part in maintaining a safe environment for the campus community and that students will make the best choices while on and off-campus. In large part, your behavior will determine if the campus remains
open for the entire semester. Also, an outbreak on the campus would affect not only our campus but the regional communities. Universities have an ethical responsibility to lead and to model good behavior. You, the students, are the heart of the university. Everyone has to participate because an outbreak becomes everyone’s problem.

Students who exhibit any of the symptoms of COVID-19 have a civic responsibility not to expose others to the virus. If a student has symptoms like a fever or a cough, the student should seek medical help and not attend class. As President Evans has stated, “In the spirit of caring for one another and ensuring the health of each other, it is important that we accept a role of responsibility.”

Any student who has a medical condition or a disability that would prohibit the student from wearing a mask should provide documentation to the Lamar Disabilities Resource Center.

Course Subject Outline

Dear student. I am very glad to have you in the Acoustics and Psychoacoustics course! This course covers the physics and psychological perception of sound. I hope to make the information useful to you throughout your professional experiences.

This syllabus is intended to assist you in navigating of this course and you should request it as a first resource when you have questions regarding the course, its contents, requirements, and assignments (content, grading, and due dates). I will be available for questions as well, but please consider this your initial source of information.

Much of the information in this course may be new to you, but my expectation is that you will learn to use this knowledge as informed and prepared future audiologists. I encourage very active participation and questioning. First rule: No question is stupid. Honestly. How will you learn if you don’t try it yourself and ask questions? This course is jam-packed with new information, but we will work persistently together to help you make this information of life-long use.

Welcome to Acoustics and Psychoacoustics Course and remember that I am here to help. My desire is to see you prosperous in your work. Let’s work together to make this an exciting discovery class, to truly see what sound is all about.

Dr. Felipe

Additional Items

Course Schedule

<table>
<thead>
<tr>
<th>class</th>
<th>DATE</th>
<th>TOPIC(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 20</td>
<td>Syllabus and Introduction Acoustics and Psychoacoustic</td>
</tr>
<tr>
<td>2</td>
<td>Jan 27</td>
<td>A Journey Through the Auditory System</td>
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<td>Mar 15-19</td>
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