

MUSC 1325 (3:3:1)

Acoustics
Sound Technology Program

Creative Arts Department
Technical Education Division
South Plains College

Levelland Campus

COURSE TITLE: MUSC 1325 ACOUSTICS (3:3:1)
INSTRUCTOR: Stuart Moody
INSTRUCTOR'S OFFICE: Creative Arts Building CA108
INSTRUCTOR'S PHONE: 806-716-2276
INSTRUCTOR'S E-MAIL: smoody@southplainscollege.edu

Office hours are posted on my door.

SOUTH PLAINS COLLEGE IMPROVES EACH STUDENT'S LIFE

I. GENERAL COURSE INFORMATION:

A. Course Description: Presentation of general principles of sound in air, characteristics of sound in recording and sound reinforcement applications. Topics include acoustical properties of studios, live performance facilities, resonances, and electronic and acoustic control.

B. End-of-Course Outcomes: Upon completion of this course, the student will:

- a. demonstrate knowledge of specific characteristics of sound in air.
- b. exhibit understanding of acoustical properties of halls, rooms, and studios.
- c. demonstrate an understanding of sound measurements.
- d. demonstrate ability to properly use audio measurement tools.

C. Course Competencies: Upon successful completion of this course, each student will have demonstrated through comprehensive examinations, quizzes and assignments; with a score of 60% or better, a competent understanding of: the origins, measurement and transference of sound in multiple mediums. The student will be able to calculate Sound Absorption Coefficients at multiple frequencies for commonly used building and acoustical materials. SCANS competencies will be met by the student: learning to take notes in class, working with fellow students, showing an understanding of the physics of sound, and choosing the correct formulas to compute sonic wavelengths, reverberation times and standing waves, choosing correct formulas, and turning in papers and tests in a timely manner.

D. It is the aim of the faculty of South Plains College to foster a spirit of complete honesty and a high standard of integrity. The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a serious offense and renders the offender liable to serious consequences, possibly suspension. Students should refer to the SPC General Catalog policy regarding consequences for cheating and plagiarism. (See "Academic Integrity" as well as "Student Conduct" sections in college catalog). At times, working with other students is encouraged for some assignments and meets SCANS competencies C9 through C14. If you have a question as to whether you may work with other students on any assignment, ask your instructor.

E. This course is designed to meet the following SCANS and Foundation skills criteria: C6, C10, F1, F3, F4, F8. A complete list of SCANS Competencies and Foundation Skills is located on the last page of the syllabi.

F. Verification of Workplace Competencies- This course is a fundamental building block for the student to move toward a Capstone Experience. The course will also transfer to a senior level institution that offers a Recording Technology major.

II. SPECIFIC COURSE/INSTRUCTOR REQUIREMENTS

A. Textbook: ***Master Handbook of Acoustics***, Sixth Edition F. Alton Everest and Ken C. Pohlman

B. Attendance Policy: In compliance with the general attendance policy of South Plains College, any student who fails to attend class for two consecutive weeks may be withdrawn from the course at the instructor's discretion. However, students who stop attending class without dropping the course at the Registrar's Office risk receiving an F in the class. Two absences may occur without penalty. Each absence after the first two will result in a 10% deduction off of the final grade. Cumulative absence penalties that result in a 59% or lower overall grade will result in being dropped from the course or a final grade of F, at the instructor's discretion. The only excused absences are for those students who are involved in an SPC event. These must be cleared with the instructor prior to the absence. This attendance policy is in effect whether a student is attending in person or via live streaming. Any other accommodations for course work must be approved by the instructor in advance. Please contact the instructor by voice mail or email if you are not able to attend the class for any reason before or the day of the expected absence.

C. Assignment Policy: Projects and reading assignments will be announced at least one class meeting prior to responsibility for material.

D. Grading Policy: Three equally weighted tests will count for 30% of the final grade. A final exam will account for 10% of the final grade. Quizzes will account for 20% of the final grade. Lab assignments will account for 15% of the final grade. Lab assignments may be arranged outside of normal class time. Written assignments will account for 15% of the final grade. Professionalism will account for 10% of the final grade. All written tests will be announced at least one week before the examination.

Students will be allowed to take exams early with permission from the instructor.

GRADING FORMAT:

A = 90 - 100%

B = 80 - 89%

C = 70 - 79%

D = 60 - 69%

F = 0 - 59%

E. Cell phone Policy: It is important that all students maintain professional attitudes and actions at all times. Cell phones and other electronic devices must be silenced or off before class begins. At his discretion, the instructor may ask a student to leave class for cell phone usage or texting.

III. COURSE OUTLINE

- A. Basic Physical Properties of Sound
- B. The Decibel
- C. Hearing and the Ear
- D. The Physics of Musical Instruments/Human Voice
- E. Reflection, Diffraction, Diffusion
- F. Absorption Coefficients and Reverb Times
- G. Calculating Room Modes/Controlling Standing Waves
- H. Acoustic Treatments

IV. Accommodations

South Plains College strives to accommodate the individual needs of all students in order to enhance their opportunities for success in the context of a comprehensive community college setting. It is the policy of South Plains College to offer all educational and employment opportunities without regard to race, color, national origin, religion, gender, disability or age (SPC Equal Opportunity Policy--General Catalog).

In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

SPC Standard Disability Statement

Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) & Lubbock Center 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

Non-Discrimination Statement

South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College -1401 College Avenue, Box 5, Levelland, TX 79336, 806-894-9611.

V. Face Covering Course Syllabus Statement—Rev. 1/4/2021

It is the policy of South Plains College for the Spring 2021 semester that as a condition of on-campus enrollment, all students are required to engage in safe behaviors to avoid the spread of COVID-19 in the SPC community. Such behaviors specifically include the requirement that all students properly wear CDC-compliant face coverings while in SPC buildings including in classrooms, labs, hallways, and restrooms. Failure to comply with this policy may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Dean of Students on the Levelland campus or the Dean/Director of external centers for Student Code of Conduct Violation. Students who believe they have been exposed or may be COVID-19 positive, must contact Health Services, DeEtte Edens, BSN, RN at (806) 716-2376 or dedens@southplainscollege.edu.

VI. SCANS Key

Competencies

C6 Organizing and Maintaining Information

- Note taking
- Completing assignments using printed instructions, tables

C10 Teaching Others

- Demonstrating studio acoustics configurations

Foundation Skills

F1 Reading – locates, understands, and interprets written information

- Demonstrating comprehension of text book concepts

F3 Arithmetic - basic computations, numerical concepts

- Calculating frequency, octaves, harmonics, wavelength

F4 Mathematics-practical application of mathematical technique

- Using formulas to calculate reverb time, absorption

F8 Decision Making—specifies goals, assesses risk, makes best choice

- Choosing the proper acoustic treatment for the desired room sound
- Working within time restrictions
- Following instructions with regard to assignment submissions

ADDENDUM

ATTENDANCE POLICY (Official SPC Catalog)

Students are expected to attend all classes in order to be successful in a course. The student may be administratively withdrawn from the course when absences become excessive as defined in the course syllabus.

When an unavoidable reason for class absence arises, such as illness, an official trip authorized by the college or an official activity, the instructor may permit the student to make up work missed. It is the student's responsibility to complete work missed within a reasonable period of time as determined by the instructor. Students are officially enrolled in all courses for which they pay tuition and fees at the time of registration. Should a student, for any reason, delay in reporting to a class after official enrollment, absences will be attributed to the student from the first class meeting.

Students who enroll in a course but have "Never Attended" by the official census date, as reported by the faculty member, will be administratively dropped by the Office of Admissions and Records. A student who does not meet the attendance requirements of a class as stated in the course syllabus and does not officially withdraw from that course by the official census date of the semester, may be administratively withdrawn from that course and receive a grade of "X" or "F" as determined by the instructor. Instructors are responsible for clearly stating their administrative drop policy in the course syllabus, and it is the student's responsibility to be aware of that policy.

It is the student's responsibility to verify administrative drops for excessive absences through MySPC using his or her student online account. If it is determined that a student is awarded financial aid for a class or classes in which the student never attended or participated, the financial aid award will be adjusted in accordance with the classes in which the student did attend/participate and the student will owe any balance resulting from the adjustment.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations and Frequently Asked Questions, please refer to the Campus Carry page at:

<http://www.southplainscollege.edu/campuscarry.php>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

Title IX Pregnancy Accommodations Statement

If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact Chris Straface, Director of Health and Wellness at 806-716-2362 or email cstraface@southplainscollege.edu for assistance.