MUT 205 - Microphone Techniques
Fall 2017
T/TH 2-2:50PM

Instructor: Byron Reinhardt
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Office: M258C
Office Hours: By Appointment
Class Location: FA 310

Course Description:

This course explores the science and uses of microphone technologies. From learning the basics of microphone construction to the science related to capturing sound, students will gain a breadth of knowledge of classic and modern microphone applications. Additionally, students will: gain hands-on experience, learn microphone care, maintenance and selection, and will engage in several recording projects to further cement their understanding of the course curriculum.

Learning Outcomes:

1. Students will be able to understand and articulate microphone terminology.
2. Students will learn the basics of microphone construction and function.
3. Students will complete three recording projects that demonstrate their ability to apply learned conceptual topics.
4. Students will complete an academic research project that demonstrates their understanding of the course subject matter.
5. Students will learn microphone selection parameters.
6. Students will learn fundamental techniques for each microphone type.
7. Students will be prepared for more advanced studies in music technology and recording arts.

Program Learning Outcomes:

1. Students will demonstrate experience and expertise in music technology hardware and software for live sound reinforcement, recording, editing, mixing, producing, MIDI sequencing, and notation.
2. Students will demonstrate broad knowledge of the music industry.
3. Students will have developed and honed their skills as musicians and recording artists.
4. Students will demonstrate a working knowledge of various studio and live sound equipment operations.
5. Students will be prepared to pursue careers in the music industry and/or graduate studies in music and sound technology.
Required Text and Materials:

- *The Recording Engineer's Handbook, 3rd Edition* by Bobby Owsinski
- Headphones with ⅛ and ¼ adaptors
- 4GB+ Flash Drive

Course Requirements:

Recording Projects:

Recording Project 1:
You will make a simple 20-30 second recording using at least two different types of microphones (further details will be discussed in class). You will submit a 1 page paper analysis of your recording describing the different sonic characteristics of the microphones.

Recording Project 2:
You will record an instrument or voice in at least two separate locations in a room or in two completely different rooms (further details will be discussed in class). The complete recording demonstration is to be approximately 30-60 seconds in total duration. You will submit a 2 page paper describing the microphones used, the instrument/voice recorded, the location(s) acoustic characteristics, and you will compare and contrast the difference between the two recordings.

Recording Project 3 (Final Recording Project):
You will make a complete 60+ second recording of music utilizing at least: two different microphone types, two different microphone placement techniques, and two different instruments. You will be given an instruction sheet in class that details all of the project guidelines, complete requirements, and analysis paper specifics.

Presentations:

You will will research an approved microphone related topic and present your findings in class.

Quizzes:

Quizzes will be on technical and conceptual topics covered in class lectures and reading assignments.

Mid-Term:

The Mid-Term Test will have two components: a listening component and a written component. A Mid-Term Guide will be given prior to the exam.

Final:
The Final will have two components: a listening component and a written component. A guide will be issued prior to Finals' week.

**Grading Policy:**

1. Recording Projects: 45%
   a. Recording Project 1: 5%
   b. Recording Project 2: 10%
   c. Recording Project 3 (Final Project): 20%
2. Quizzes: 15%
3. Presentations: 10%
4. Mid-Term: 15%
5. Final: 15%

**Grading Scale:**
A: 90-100
B: 80-89
C: 70-79
D: 60-69
F: 59 & Below

**Weekly Schedule:**

Week 1
- Course Introduction and Syllabus

Week 2
- Microphone Types, Construction, and Function
- Polar Patterns, Response, and Phases
  - Recording Project 1 Assigned

Week 3
- Dynamic Microphones and Applications
- Condenser and Ribbon Microphone Applications
  - Recording Project 1 Due!

Week 4
- Spaces! Basic Room Acoustics
- Acoustic Materials
  - Quiz 1

Week 5
- Pre-Amplification, Phantom Power, and Operations
  - Recording Project 2 Assigned
- Applied Microphone Techniques - Acoustic Guitar

Week 6
- Applied Microphone Techniques - Electric Guitar
- Applied Microphone Techniques - Bass

Week 7
- Applied Microphone Techniques - Drum Week 1
- Recording Project 2 Due

Week 8
- Applied Microphone Techniques - Drum Week 2
- Mid-Term Test

Week 9
- Applied Microphone Techniques - Vocal Week

Week 10
- Applied Microphone Techniques - Piano
- Applied Microphone Techniques - Strings

Week 11
- Applied Microphone Techniques - Woodwinds
- Applied Microphone Techniques - Brass

Week 12
- Applied Microphone Techniques - Percussion
- Applied Microphone Techniques - Recording Mixed Instrumentation Groups
  - Quiz 2

Week 13
- Microphone Placement Theory Review
  - Thanksgiving Break - No Class

Week 14
- Class Presentations

Week 15
- Class Presentations

Week 16
- Finals

Course Evaluations:
Your participation in the evaluations of this course are very important and helpful to this class, program, and the university. Near the conclusion of each semester, students in the College of Fine Arts electronically evaluate courses taken with the college. The evaluation is used for a variety of important purposes including:
  1. Course and program improvement, planning and accreditation;
  2. Instruction evaluation purposes; and
  3. Making decisions on faculty tenure, promotion, and retention.
As you evaluate this course, please be thoughtful, thorough, and accurate in completing the evaluation. Please know that the College of Fine Arts is committed to excellence in teaching and continued improvement. Therefore, your participation is crucial.
The course evaluation process has been simplified and is completed electronically through MySFA. Although the instructor will be able to view the names of students who complete the survey, all rating and comments are confidential and anonymous, and will not be available to the instructor until after final grades are posted.

**Attendance Policy:**
*Class will begin promptly and on time. Role will be taken at the beginning of class.*

Due to the nature of this course, and the SRT field of study, attendance to class, sessions, and labs are crucial to your learning and are thus required. Experience, class interaction, and hand-ons activities are just as important to your training and understanding of concepts as is the academic study components of the program. With that being said, you are expected to arrive to class, lab times, and scheduled meetings, prepared and on time. If you arrive more than 5 minutes late without a valid, University approved excuse, or you did not make prior arrangements with your instructor, you will be marked absent. Additionally, **Sleeping in class** is not acceptable. If you are found to be sleeping in class, you will be marked absent and asked to leave. If you arrive to class and proceed to go to sleep, it is not considered that you attended the class.

You are allotted 2 unexcused absences. Upon receiving a third unexcused absence your grade will be reduced by half a letter grade. Upon receiving a fourth unexcused absence, your grade will be reduced by a full letter grade in addition to the half reduction received for the third absence. Please note that university policy states that upon your fifth absence, you will automatically receive an “F” grade for the course. Further information about absences can be found at the following university resource:


**Personal Electronic Devices:**

Cellphones, tablets, and personal electronic communication devices are to be turned off or set to silent while in class. Your are here because you wish to pursue studies and/or a career in Sound Recording Technology, the Music Industry, etc. A ringing cellphone can ruin a recording session, distract an artist, interrupt a meeting or disrupt a learning environment. You must learn to be aware of the audible status of your devices. Should you be an individual who continually disrupts class because your device(s) beep, ring, or otherwise distract this learning environment, you will lose participation points and if the offenses continue, you will be asked to leave the class and will have to meet with the director of the SRT program before being allowed back into class.

**Obtaining Help:**

If you ever have questions regarding course content, assignments, test, etc., or feel that you require some additional help, please contact me immediately. Please make note of my office hours. If for some reason you are unable to attend my office hours, see me before or after class, or send me an email, to schedule an appointment. My line of communication is always open to you and I urge you to communicate any issues you may be having that may hinder your progress in this class, program, or university.
Email and Correspondence:
Any email correspondences regarding this course, homework, meetings, advisement, etc., should be sent from your SFASU email account. Additionally, the subject title should begin with MUT 205. If you have a sensitive matter to discuss with me, please make arrangements to meet with me in person. Although I will make every effort to answer your emails as soon as possible, you should never expect an immediate response to your email. If you ever have an emergency, a sensitive topic that needs immediate attention, or a time sensitive matter to address, call my or the school of music office.

Academic Accommodation for Students with Disabilities: Policy 6.1 and 6.6
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 936-468-3004 as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

Student Academic Dishonesty: Policy 4.1
Abiding by university policy on academic integrity is a responsibility of all university faculty and students.

Definition of Academic Dishonesty
Academic dishonesty includes both cheating and plagiarism. Cheating includes, but is not limited to:
- using or attempting to use unauthorized materials on any class assignment or exam;
- falsifying or inventing of any information, including citations, on an assignment; and/or;
- helping or attempting to help another in an act of cheating or plagiarism.

Plagiarism is presenting the words or ideas of another person as if they were one’s own. Examples of plagiarism include, but are not limited to:
- submitting an assignment as one’s own work when it is at least partly the work of another person;
- submitting a work that has been purchased or otherwise obtained from the Internet or another source; and/or,
- incorporating the words or ideas of an author into one’s paper or presentation without giving the author credit.

Penalties for Academic Dishonesty
Penalties may include, but are not limited to reprimand, no credit for the assignment or exam, re-submission of the work, make-up exam, failure of the course, or expulsion from the university
Student Appeals
A student who wishes to appeal decisions related to academic dishonesty should follow procedures outlined in Academic Appeals by Students (6.3).

Withheld Grades: Policy 5.5

At the discretion of the instructor of record and with the approval of the academic unit head, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F, except as allowed through policy [i.e., Active Military Service (6.14)]. If students register for the same course in future semesters, the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

Student Code of Conduct: Policy 10.4

Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program. Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This policy--- applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the iCare: Early Alert Program at SFA. Information regarding the iCare program is found at https://www.sfasu.edu/judicial/earlyalert.asp or call the office at 936-468-2703.

Classroom Policies:

Our field of study, Sound Recording Technology, is a special field of study and we are fortunate to have such a program here at SFASU. We get to work and learn with specialized, and sometimes very fragile and expensive equipment. Thus, the SRT program and associated classes have some specialized classroom rules that you may not be accustomed to in other university classes.

1. Wash your hands before entering class. In addition to helping not spread germs and illness, we will be working on shared computer systems, mixers, and other equipment. Much of the equipment is hard to thoroughly clean and oil build up from your hands can also degrade the equipment. Washing your hands before class is a win-win for everyone and the university’s equipment.

2. Good Hygiene: Unlike a large format lecture class, where your professor is far away from you and only a few students may be in close proximity to you, we will all be working close together. At times, you and I will be side by side learning about materials,
components, tools, and techniques used in SRT. For your health and the sake of your colleagues and I, please practice good hygiene.

3. Respect: You should know how to appropriately conduct yourself as a respectful and thoughtful adult. With that being said, demonstrating disrespect toward your colleagues, your instructor, equipment, or this institution will not be tolerated.
   a. Special note: if you ever have hopes of working in the music industry, you will need to know how to get along with all sorts of people(s).

4. No texting in class.

5. Respect the equipment: you will be fortunate enough to work with some really special and expensive equipment. Please handle this equipment with the utmost care. Never drop a microphone. Always be aware of yourself, surroundings, and others while handling the recording equipment.

SRT Lab Policies:

1. Only SRT students are allowed in the lab. School of music students are welcome if permission has been given by the director of the SRT program. Non-school of music students are never allowed in the lab without special permission, arrangement, or the presence of a SRT faculty member.

2. Adhere to your schedule times. Show up on time and leave on time. Our space is limited and we must be courteous to one another. Additionally, this is great practice for the real world or sharing studio and artistic spaces.

3. Never load or install programs on the SRT workstations...EVER.

4. Always bring your own headphones to the lab. You will do most of your lab work on headphones; however, if no one else is in the lab, you are welcome to use the loudspeakers.

5. Back up your work on your personal thumb drive. Never expect your session to live on the SRT lab machines.

6. Safety! Never touch exposed wires! Some of our equipment is high powered and if it becomes damaged and goes unnoticed, exposed wires can pose a hazard to you and others. Report any exposed power wires to your instructor immediately. Do not attempt to deal with it yourself. Safety! Your hearing is extremely important. Do not listen to music or recordings at high levels for extended periods of time.