



Audio & Music Engineering

AME191/MUS191/ECE479 Syllabus

Fall 2014

Instructor: Stephen Roessner

Office: CSB 405

Google Voice Number: (530) 4-ANALOG. Feel free to call, but I may not return your call immediately.

Email: stephen.roessner@rochester.edu. This is the best way to reach me.

Office Hours: Monday 1:00-2:00, or by appointment.

Class time: Monday and Wednesday, 2:00-3:15pm

Classroom: CSB 412

Prerequisites: None, but some familiarity with audio, music, and physics will help.

Required Materials

- **Book:** Modern Recording Techniques (7th ed.) by David Huber, Focal Press **or** Sound and Recording (5th ed.) by Francis Rumsey— On Reserve in Carlson
- **500 Gig or greater External USB drive to store projects on.** Flash drives will not work properly. Your drive must have a separate power source in order to run in conjunction with Pro Tools.

Additional reading material (not required to purchase)

- Free Subscription to Tape Op Magazine:
<http://tapeop.com/subscriptions/>
- Total Recording by David Moulton, KIQ Publications
- Master Handbook of Acoustics by F. Alton Everest
- Mastering Audio by Bob Katz
- Membership in Audio Engineering Society (AES) is optional for all students.
<http://www.aes.org/membership/>

Attendance

Attendance is mandatory in order to use the studio. If you cannot make a class, please contact me by email or phone.

Labs

Your recording sessions are your labs. There is no lab every Tuesday night. TA's will hold labs on occasion for extra help on running the board, tape machine, and Pro Tools. These will be announced when they are scheduled.

Studio Use

AME 191 students can only book time in the CSB studio. Rettner Hall can only be booked by students who have passed AME 191 and are enrolled in/passed AME 192. AME 191 students act as assistants to other students in Rettner Hall.

Grades

1) Grading will be based on projects, homeworks, a midterm and a final exam. All homework and projects must be submitted on the due date in order to be eligible for full credit.

Homework – 10% (2 HW assignments, 5% each)

Midterm – 25%

Final Exam– 25%

Projects – 20% (4 Group Projects, 5% each)

Final Project - 20%

2) If you need to have an extension on a project, please let me know ***before the date it is due!***

3) **Grammar will be graded on all write ups! You can lose a maximum of 10 points to grammar.**

4) Extensions and make-ups will be allowed if it is deemed appropriate. There will be ***no makeup exams***, except in cases of serious documented emergencies or religious holidays that fall on the day of the exam.

5) **GROUP GRADES:** All grades within a group will be the same. I am assuming everyone is doing their fair share of the work. If this is not the case, please feel free to approach me about someone not pulling weight in your group. If presented with enough evidence, I will give them a lower grade than the rest of the group.

Course Outline

This course covers the acoustical and psychoacoustic fundamentals of audio recording including the nature of sound, sound pressure level, frequency and pitch, hearing and sound perception, reflection, absorption and diffusion of sound, sound diffraction, room acoustics, reverberation, and studio design principles.

The course also provides practical experience in audio recording including an introduction to recording studio equipment, microphones and microphone placement techniques, signal flow, amplification, analog and digital recording, analog to digital conversion, digital processing of sound, multi-track recording and an introduction to mixing and mastering.

Each student is required to complete a substantive recording project at the end of the course.

Course Objectives

1. Students will learn the acoustical and psychoacoustic principles required to develop an understanding of the practical techniques employed in audio recording.
2. Students will learn the basics of studio recording practice and develop the core competencies needed to make high-quality audio recordings. Student competencies will be demonstrated in a final recording project.
3. Students will develop the critical listening skills to enable informed analysis and written criticism of their own recordings and recordings made by others.

Course Format

This course is set up to be mainly project based, however, writing will be involved in your final submission. The course will be broken into two sections, theory and practice.

Mondays – Lectures and theory on a topic.

Wednesdays – Hands on practicum in the studio.

All students will be required to spend time outside of class in the studio.

See **STUDIO RULES AND GUIDELINES** for more about this.

GENERAL INFORMATION

Class Guidelines:

Students are encouraged to ask clarification questions in lecture. I also strongly encourage students to email me with any questions you have about the course content.

Availability of Course Information:

All of the information about the course, including the syllabus and schedule, will be made available to you electronically, through **Blackboard**. We will communicate with the class regularly through Blackboard. Your exam and homework scores will only be made available to you through Blackboard. Therefore, it is required that you have access to Blackboard for this course!

Academic Honesty:

You should be aware of the rules involving academic honesty as laid out in the college website at <http://www.rochester.edu/College/honesty/>. All cases of suspected academic dishonesty will be reported to the Board on Academic Dishonesty, according to University policy. In general, don't cheat during exams.

University Resources:

There are many resources available to students at the University. Some students have found the services below particularly helpful. If you think that you might benefit from either of these services, I recommend that you find out more about them.