

Introduction to Audio and Recording Sciences

MUS-355

Class Number 75563

M/W/F, 10-10:50AM

Music Building Room 147

3 Units

Mr. James Adams, Instructor

Office Hours: M/W/F 11-1PM and by appointment

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Course Descriptions

IARS is a course that surveys the basics of audio and recording sciences in relation to the fields of music, audio recording, production, and acoustical perceptions. This course is a core requirement for all music technology majors and an elective for all other music majors; non-music majors are welcome to take this course also. The course is divided into two lecture sessions (M/W) with an applied lab session (F).

Prerequisites: Students must have completed at least Math 1A (College Algebra Equivalent) or attain instructor approval prior to registering for this course.

Course Objectives

Students who successfully complete this course will:

1. have a basic understanding of acoustics (i.e. how sound[s] behaves).
2. be familiar with basic audio electronics.
3. gain an understanding of human audio perception.
4. be familiar with basic recording techniques, programs and equipment.
5. be able to record and produce various audio recordings.
6. satisfy the prerequisite for MUS-499 (Advanced Recording Science).

Required Text and Materials

Huber, David. Modern Recording Techniques. Elsevier Inc. Oxford, UK. 2009

Course Projects and Grading

Grading Policy:

Quizzes.....100 points

Mid-Term.....100 points

Research Paper.....100 points

Final Paper100 points

Final Project.....300 points

Participation.....300 points

The grading scale (%):

90-100A

80-89B

70-79C

60-69D

59 and below F

Note: A grade of a C or higher must be necessary in order to meet the prerequisite of MUS-499.

Course Work

Quizzes: There will be 10, 10 point quizzes given throughout the semester. The quizzes will consist of 5-10 short answer questions. You will only be quizzed on materials or terms presented in class.

Mid-Term: The Mid-Term will be on material covered up to then date of the exam. The test will consist of multiple choice, short answer and True or False questions.

Research Paper: 3-5 research paper on an approved topic.

Final Paper: In this paper, you will demonstrate your knowledge of audio and recording sciences by reviewing an approved recording of music in 2-3 pages. You will use terms and knowledge covered in the course to: describe what characteristics exist in the recording, identify the different sounds or instruments, identify any flaws if they exist and describe what you did/did not like about the recording.

Final Project: For the Final Project, each student enrolled in the class must complete a short recording session with me. I will assume the role of artist and you will be the engineer/producer. You will use the knowledge you gained from class to execute a simple multitrack (only 2) recording with the provided materials. You will have your choice of two types of sessions of equal difficulty that will be covered during the course. After successfully completing the session,

you will submit a mixed and mastered copy of the recording on the day of the final; you will have one week to master the two channel track.

Note: You will not be graded on my performance. You will not be penalized for hardware or software failure during the exam. The performance recording will not be more than 120 seconds long. You will only be allowed to use the tools specified for the session. After the session, I cannot help you with the mixing and mastering process.

Course Calendar

Week 1	Course Intro
.....	What is Sound?
.....	How we hear.
Week 2	Overtone Series
.....	Music Perception
.....	Recording History Survey
Week 3	Microphones Week
.....	Microphones continued
.....	Microphones in action lab
Week 4	Research Paper Discussion/Speakers Week (History and types)
.....	Speakers Cont. (Performance demands from music and systems)
.....	Noise Lab! (Speaker placement and driver demos)
Week 5	Pre and Power Amplifiers Overview
.....	Amp. Types
.....	Power Lab! (Various Power and Pre-Amp demo)
Week 6	Recording Mediums (analog and digital)
.....	Recording Interfaces and Gear
.....	Recording Lab! Capturing Sounds!
Week 7	Final Paper Topic Discussion/Recording Software Week
.....	Recording Software Cont. and formats
.....	Recording Software Lab!

Week 8Final Paper Topic Discussions/Recording Project Discussions
 Plug-Ins, MIDI, DAW, DST, RTAS, VST and a lot of other terms!
 MIDI Lab!
 Week 9 Review Day!
 Research Papers Due
 Mid-Term
 Week 10 Acoustic Instruments and their sounds
 Mic placement techniques
 Acoustic Lab
 Week 11 Amplified Instruments
 Sonic Abilities/Characteristics of Amplified Instruments
 Mic. Placement for Amplified Instruments (Mic'ing Lab)
 Week 11 Room Acoustics
 Synthetic Rooms (Plug-Ins and effects)
 On Campus Field Trip
 Week 12 Final Project Workshop Week
 Final Project Workshop Week
 Final Paper Meetings/No Lab
 Week 13 The Recording Industry
 Recording Time Management
 Week 14 No Classes
 Week 15 Final Project Workshop
 Final Project Appointments
 Final Project Appointments
 Week 16 Finals/Final Papers and Project Recording Due

THE UNIVERSITY OF AKRON ENROLLMENT POLICY

Students whose names do not appear on the class list will not be permitted to participate (take exams or receive credit) without first showing proof of registration by no later than the fourteenth day of the semester (Sept. 9).

Students may withdraw from a course without advisor or instructor's signature through the fourteenth day of the semester. The last day to withdraw from this class is the Sunday of week 7 (Oct. 13).

STUDENT PRIVACY RIGHTS

Under FERPA, as a student attending a post-secondary institution, you have a right to privacy. This prohibits the release of information concerning grades, assignments, or progress to anyone other than you. As a result, I will not be posting grades or responding to grade requests by telephone or e-mail. I will be happy to discuss your grade or class work on a face-to-face basis in my office.

STUDENTS WITH DISABILITIES

In accordance with University Policy, students with a documented disability for which accommodations may be required should call the Accessibility Office (330) 972-7928, TTY/TDD 330-972-5764.

SEXUAL HARRASSMENT

The brochure on sexual harassment is outlined at [HYPERLINK "http://www.uakron.edu/ogc"](http://www.uakron.edu/ogc) <http://www.uakron.edu/ogc>.

PLAGIARISM AND ACADEMIC DISHONESTY

Plagiarism is the act of representing directly or indirectly another person's work as your own. Plagiarism will not be tolerated in this class. The University of Akron policy for plagiarism is outlined at [HYPERLINK "http://www.uakron.edu/ogc"](http://www.uakron.edu/ogc) <http://www.uakron.edu/ogc>. The University of Akron policy for academic misconduct can be found in the Student Code of Conduct.

FOR FURTHER INFORMATION ON ANY OF THESE POLICIES

Log on to [HYPERLINK "http://www.uakron.edu/ogc"](http://www.uakron.edu/ogc) <http://www.uakron.edu/ogc>.

INCLEMENT WEATHER

In case of inclement weather, students are advised to call (330) 972-SNOW.