

Syllabus for

MUSC 2448 - Audio Engineering IV

**McLennan Community College
Waco, TX**

Revised 08-09

MUSC 2448 Audio Engineering IV

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WHAT IS THIS COURSE?

Studio Production is the fourth and final semester Audio Technology course in which sophomore audio students are able to complete their study of recording skills. This course consists of lecture sessions and a practicum laboratory in which students can integrate the materials and equipment covered by the lecture.

Periodical reading and reports will be from Mix magazine, EQ magazine, Electronic Musician Magazine.

ATTENDANCE POLICY:

Because of the technical nature of this course, tardiness or missed classes will seriously jeopardize your chances of success. If you experience a true emergency and must miss a class, contact the fine arts office. Your attendance will affect your grade as follows:

3 tardy = 1 absence

Accumulated absences will result in a proportional lowering of the student's grade.

25% absence will result in the student being dropped and/or failed, see the MCC official Attendance Policy statement at end of this syllabus.

GRADING POLICY:

A student's grade will be the cumulative total of the following criteria:

60% Performance on the objectives.

30% Attendance, professional attitude and conduct, evaluated by instructor's observation.

10% Construction of audio device.

The grading scale used in this class is:

A=90-100%

B=80-89%

C=70-79%

D=60-69%

F=BELOW 60%

OFFICE HOURS:

I will be glad to help you outside of classtime. I have regular office hours posted outside of my office. Many times I am meeting with someone else in the studio or elsewhere during these hours, so be sure to make an appointment with me or leave a message for me with the secretary in the PAC office.

Disabilities/ADA

In accordance with the requirements of the Americans with Disabilities Act (ADA) and the regulations published by the United States Department of Justice 28 C.F.R. 35.107(a), MCC's designated ADA co-coordinators, Dr. Johnette McKown, Executive Vice President and Dr. Lynn Abernathy, Vice President, Student Services shall be responsible for coordinating the College's efforts to comply with and carry out its responsibilities under ADA. Students with disabilities requiring physical, classroom, or testing accommodations should contact Marc Sweatt, Disability Specialist, at 299-8122 or msweatt@mclennan.edu.

COMPETENCY and OBJECTIVES

The following **competencies** outline the purposes of this course. The **objectives** are the specific activities that we will carry out.

Competency 1 Develop advanced skills in trouble shooting, maintenance and repair of audio electronic equipment.

Objective: Maintain studio equipment to peak performance level.

Objective: Perform repairs of cables and circuit components.

Objective: Analyze ground faults, and continuity problems using a Volt Ohm-Milliammeter and Oscilloscope.

Objective: Repair and fault find audio equipment.

Source: *Class lecture \ lab*

Evaluation: *projects, 80% mastery required*

Competency 2 Demonstrate advanced interfacing of audio equipment.

Objective: Implement correct application of balancing, unbalanced, level matching.

Objective: Isolate and correct ground potential differences in interconnections.

Objective: Identify, isolate and correct the sources of hum and noise in an audio system.

Source: *Class lecture \ lab*

Evaluation: *Projects; 80% mastery required*

Competency 3 Develop advanced skills in performing live 2 track recording.

Objective: Select and maintain the equipment needed to do live two track recording.

Objective: Exhibit good practice in microphone and equipment operation and placement.

Objective: Record live 2 track recordings.

Source: *Class lecture \ lab, and handouts*

Evaluation: *Performance of live 2 track recordings, 100% mastery required*

Competency 4 Develop necessary knowledge to do advanced recording and editing of DAW recording systems.

Objective: Perform recording sessions and manipulate audio and midi tracks to create release quality audio recordings using Digital Audio Workstations.

Objective: Perform mastering and editing of complete audio projects using DAW.

Objective: Demonstrate proper equipment utilization and session procedures using DAW recording workstation..

Source: Class lecture \ lab

Evaluation: Demonstration of skills; 80% mastery required

Competency 5 Develop necessary knowledge to tune-up and optimize computer-based recording systems.

Objective: Explain operation of audio interfaces integration with DAW systems.

Objective: Set up audio – digital interface input, output, and monitoring systems.

Objective: Record high quality audio input sources.

Source: Class lecture \ lab

Evaluation: Demonstration of skills; 80% mastery required

Competency 6 Demonstrate advanced engineering skills in audio recording sessions.

Objective: Plan, allocate and follow through with externally imposed time budgets.

Objective: Direct and supervise efficient studio planning and setup\teardown.

Objective: Identify and Contrast microphone\input quality with desired sound.

Objective: Analyze comprehensive multiple signal flow problems, and respond effectively.

Objective: Advanced operation of console and patchbay functions; Setting optimum levels throughout signal chain, and on the recorded medium.

Objective: Maintain principles of diplomacy, maintain professional work ethics and relationships while in session.

Source: Class lecture \ lab, and hand outs

Evaluation: Demonstration of skills; 80% mastery required

Competency 7 Develop the necessary skills to efficiently operate digital multitrack recorder.

Objective: Perform entire recording sessions from power-up to session archive on the digital multitrack.

Objective: Perform patch, metering, segment allocation, and data manipulation necessary for timely session completion.

Objective: Compile the necessary data records and project, segment labels for recorded projects.

Source: Class lecture \ lab, and handouts

Evaluation: Demonstration of skills; 80% mastery required

Competency 8 Demonstrate advanced MIDI operations in the control room.

Objective: Perform audio triggering for midi devices, and midi control of audio devices.

Objective: Use audio outputs from midi voice modules on recording sessions.

Objective: Use a variety of midi controller input devices.

Objective: Demonstrate and perform SMPTE lockups between midi\audio systems.

Source: Class lecture \ lab, and hand outs

Evaluation: Demonstration of skills; 80% mastery required

Competency 9 Develop advanced skills in Programming midi devices.

Objective: Perform master settings editing, channel editing, voice editing, system

exclusive dumps.

Objective: Demonstrate recording of programmed modules and voices (pan, level, channel, audio outputs, primary and secondary voice manipulation, sysex dump-restore).

Source: *Class lecture \ lab, and hand outs*

Evaluation: *Demonstration of skills; 80% mastery required*

Competency 10 Demonstrate advanced skills in Computer sequencing.

Objective: Perform manipulation of input ports, output ports, channel allocation, midi interface, for computer sequencing.

Objective: Perform multiple channel midi computer sequencing, editing, midi volume changes, patch changes, pan changes, system exclusive dumps.

Objective: Demonstrate in recording session, midi and SMPTE synchronization of a sequencer to audio recorders.

Source: *Class lecture \ lab, and hand outs*

Evaluation: *Demonstration of skills; 80% mastery required*

Competency 11 Demonstrate advanced digital audio editing.

Objective: Compile multiple takes into an edited final "comped" track.

Objective: Perform multiple track editing and transitions on recording sessions.

Objective: Master a multiple song demo.

Objective: Perform sessions with manipulation of multiple tracks of digital effects and EQ.

Objective: Perform virtual mixing, track bouncing, automated levels, punch ins.

Objective: Demonstrate set-up, speed and agility in automating virtual mixes.

Source: *Class lecture \ lab, and hand outs*

Evaluation: *Demonstration of skills; 100% mastery required*

Competency 12 Review information from audio trade periodicals.

Objective: Summarize procedures, trends, or technical information presented in articles from trade publications.

Source: *Audio trade periodicals (Mix magazine, EQ magazine, Electronic Musician Magazine)*

Evaluation: *Monthly report due; 80% mastery required, must be typed and grammatically correct.*

Competency 13 Develop audio critical listening skills.

Objective: Analyze recordings of students choice, identifying techniques, procedures, sound sources, instrumentation.

Source: *Student provided commercial recordings.*

Evaluation: *Monthly oral report due; 80% mastery required*

Competency 14 Demonstrate professional conduct.

Objective: Demonstrate regular attendance, promptness, adequate preparation, willingness to volunteer, the ability to deal with difficulties, work with groups, and deal with adversity.

Source: *Skills demonstration.*

Evaluation: Classroom observation by instructor; 80% mastery required