

**MUSC 60B Course Outline as of Fall 2021****CATALOG INFORMATION**

Dept and Nbr: MUSC 60B Title: AUDIO RECORDING 2

Full Title: Audio Recording 2

Last Reviewed: 2/27/2023

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	2.00	8	Lab Scheduled	35.00
		Contact DHR	1.00		Contact DHR	17.50
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

This course covers intermediate- to advanced-level applications in studio recording with Pro Tools and an introduction to live sound and live recording. Topics include signal processing, mixing techniques, use of plug-ins, and preparation of the final mixdown. Students will learn how to operate a recording studio independently.

**Prerequisites/Corequisites:**

Course Completion of MUSC 60A

**Recommended Preparation:****Limits on Enrollment:****Schedule of Classes Information:**

Description: This course covers intermediate- to advanced-level applications in studio recording with Pro Tools and an introduction to live sound and live recording. Topics include signal processing, mixing techniques, use of plug-ins, and preparation of the final mixdown. Students will learn how to operate a recording studio independently. (Grade Only)

Prerequisites/Corequisites: Course Completion of MUSC 60A

Recommended:  
Limits on Enrollment:  
Transfer Credit: CSU;  
Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>CSU Transfer:</b>	Transferable	Effective: Fall 2009	Inactive:
<b>UC Transfer:</b>		Effective:	Inactive:

### **CID:**

#### **Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Apply a working knowledge of the art and science of sound recording to produce professional-quality digital audio with Pro Tools.

### **Objectives:**

Students will be able to:

1. Record, edit, mix, and master digital audio with Pro Tools, expanding on the theoretical and technical knowledge developed in MUSC 60A.
2. Explain the functions and applications of signal processors and demonstrate their usage.
3. Utilize a variety of software plug-ins within Pro Tools.
4. Prepare final mixdowns of audio projects in a variety of formats.
5. Explain the mastering process and commercial standards for a variety of formats including CD, vinyl, and streaming.
6. Evaluate and critique audio recordings, describing the techniques used to create the soundscape.
7. Demonstrate professionalism in a recording studio environment.
8. Research industry resources to stay current with theoretical and technological advances in the recording industry.

### **Topics and Scope:**

Taught as fully integrated lecture/lab

#### **I. Introduction to Live Sound**

- A. Acoustics
- B. Sound systems
- C. Introduction to the Venue digital board

- D. How to run a live show
- II. Editing and Mixing in Pro Tools
  - A. Importing media into sessions
  - B. Selecting and navigating
    - 1. Timeline vs. edit selections
    - 2. Working with selections
    - 3. Adjusting session view
    - 4. Adding markers to sessions
  - C. Basic Editing Techniques
    - 1. Editing regions
    - 2. Moving and trimming regions
    - 3. Creating fade effects
    - 4. Undo and revert-to-saved
  - D. Basic Mixing Techniques
    - 1. The Pro Tools mix window
    - 2. Basic automation
    - 3. Real-time plug-ins
  - E. Creating a final mix
    - 1. Backing up sessions
    - 2. Sharing sessions between systems
    - 3. Creating stereo mixdowns
    - 4. Burning to CD
- III. Applications of Signal Processing
  - A. Inline vs. side-chain processing
  - B. Equalization (EQ)
    - 1. Peaking and shelving filters
    - 2. High-pass and low-pass filters
    - 3. Graphic vs. parametric EQ
    - 4. Applying EQ
  - C. Time-based effects
    - 1. Delay
    - 2. Reverb
    - 3. Phase, chorus, and flange
  - D. Dynamics Processing
    - 1. Compression
    - 2. Expansion
    - 3. Limiting
    - 4. Gates
  - E. Pitch-shifting effects
  - F. Psychoacoustic enhancement
  - G. Dynamic effects automation
  - H. Noise Reduction (NR)
- IV. Introduction to the Mastering and Manufacturing Process
  - A. Loudness standards
  - B. Loudness metering: LUF and RMS
  - C. Signal Processing for Mastering
    - 1. EQ
    - 2. Compression
    - 3. Limiting
    - 4. M/S Processing
  - D. Metadata
  - E. Considerations for physical vs. digital formats

## V. Critical Listening Skills: Evaluating Audio Recordings and The Art of Mixing

- A. Ear training
- B. Reference Tracks
- C. Gain Structure

## VI. Recording Industry Resources: Staying Current

- A. Magazines and journals
- B. Societies and conferences
- C. Online resources

## VII. Standards of Professionalism in the Recording Environment

### Assignment:

1. Reading (10-20 pp. per week) from the text, handouts, and/or online tutorials
2. Hands-on proficiency demonstrations on the hardware and software
3. Quizzes (3-5) on course topics (multiple choice/short answer/essay as needed)
4. Completion of required laboratory hours
5. Recording project(s): an original recording (minimum of 3 minutes in length) that demonstrates mastery of the concepts of the course

### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.

Writing  
0 - 0%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Recording project(s)

Problem solving  
40 - 55%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Hands-on proficiency demonstrations

Skill Demonstrations  
25 - 35%

**Exams:** All forms of formal testing, other than skill performance exams.

Quizzes

Exams  
10 - 25%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

**Representative Textbooks and Materials:**

Modern Recording Techniques. 9th ed. Huber, David Miles and Runstein, Robert. Routledge. 2017

The Recording Engineer's Handbook. 4th ed. Owinski, Bobby. BOMG Publishing. 2017

The Mixing Engineer's Handbook. 4th ed. Owinski, Bobby. Bobby Owsinski Media Group. 2017

Pro Tools 101 (Official courseware). Cook, Frank D. Cengage Learning PTR. 2013 (classic)  
Instructor prepared materials