MUSC 60B Course Outline as of Fall 2009

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	17.5	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 audio recording with Digidesign Pro Tools. Topics include signal processing, mixing techniques, use of plug-ins, integration of live audio and MIDI, and preparation of the final mixdown.

Prerequisites/Corequisites:
Course Completion of MUSC 60A

Recommended Preparation:
Course Completion or Concurrent Enrollment in MUSC 51B

Limits on Enrollment:

Schedule of Classes Information:
Description: This course covers intermediate- to advanced-level applications in audio recording with Digidesign Pro Tools. Topics include signal processing, mixing techniques, use of plug-ins, integration of live audio and MIDI, and preparation of the final mixdown. (Grade Only)
Prerequisites/Corequisites: Course Completion of MUSC 60A
Recommended: Course Completion or Concurrent Enrollment in MUSC 51B
Limits on Enrollment:

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

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**			Effective:	Inactive:
CSU GE:	**Transfer Area**			Effective:	Inactive:
IGETC:	**Transfer Area**			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Fall 2009	Inactive:	
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:
Both Certificate and Major Applicable

COURSE CONTENT

Outcomes and Objectives:
Upon completion of this course, students will be able to:
1. Record, edit, mix, and master digital audio with Digidesign 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. Demonstrate the integration of live audio and MIDI tracks within the Pro Tools interface.
5. Explain and utilize synchronization protocols including SMPTE (Society of Motion Picture and Television Engineers) time code and MIDI sync.
6. Prepare final mixdowns of audio projects in a variety of formats.
7. Diagram and explain the mastering and manufacturing processes for a variety of media including CD, DVD, and older formats.
8. Evaluate and critique audio recordings, describing the techniques used to create the soundscape.
9. Demonstrate professionalism in a recording studio environment.
10. Research industry resources to stay current with theoretical and technological advances in the recording industry.

Topics and Scope:

I. Editing and Mixing in Digidesign Pro Tools
- A. Importing media into sessions
- B. MIDI in Pro Tools
  1. Sample-based operation vs. tick-based operation
  2. Recording MIDI
  3. Using virtual instruments
- C. Selecting and navigating
  1. Timeline vs. edit selections
  2. Working with selections
  3. Adjusting session view

4. Adding markers to sessions
D. Basic Editing Techniques
1. Editing regions
2. Moving and trimming regions
3. Creating fade effects
4. Undo and revert-to-saved
E. Basic Mixing Techniques
1. The Pro Tools mix window
2. Basic automation
3. Real-time plug-ins
F. Creating a final mix
1. Backing up sessions
2. Sharing sessions between systems
3. Creating stereo mixdowns
4. Burning to CD

II. Synchronization
A. SMPTE (Society of Motion Picture and Television Engineers) time code
B. MIDI-based synchronization
C. Proprietary synchronization systems

III. 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. Compressors, limiters, and gates
E. Pitch-shifting effects
F. Psychoacoustic enhancement
G. Dynamic effects automation

IV. Noise Reduction (NR)
A. The compansion process
B. NR systems: dbx, Dolby
C. Noise gates
D. Digital noise reduction
E. Fast Fourier transform

V. Creating Sound Effects for Multimedia

VI. Introduction to the Mastering and Manufacturing Process
A. CDs
B. DVDs
C. Older formats: tape and vinyl
D. Producing for digital delivery
E. Producing for the multimedia and the web

VII. Critical Listening Skills: Evaluating Audio Recordings

VIII. Recording Industry Resources: Staying Current
A. Magazines and journals
B. Societies and conferences
C. Online resources

Assignment:

1. Reading (10-20 pp. per week) from the text and handouts.
2. Hands-on proficiency demonstrations on the hardware and software.
3. Quizzes (3-5) on vocabulary and technical terminology.
4. Completion of required laboratory hours.
5. Final project: 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.

Terminology quizzes	Exams 10 - 25%

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

Attendance and participation; Professionalism	Other Category 5 - 10%

Representative Textbooks and Materials:

I. Textbooks

Modern Recording Techniques, 6th ed. by David Miles Huber and Robert Runstein. Focal Press, 2005.

Pro Tools 101 Official Courseware, Version 7.4, 2nd ed. by Digidesign. Course Technology PTR, 2007.

II. Trade periodicals such as:

Mix Magazine
Pro Sound Magazine
Electronic Musician Magazine

III. Instructor prepared materials