MUSIC178 : Introduction To Recording

General Information

Author:	• Tobin Sparfeld
Course Code (CB01) :	MUSIC178
Course Title (CB02) :	Introduction To Recording
Department:	MUSIC
Proposal Start:	Fall 2024
TOP Code (CB03) :	(1005.00) Commercial Music
CIP Code:	(10.0203) Recording Arts Technology/Technician.
SAM Code (CB09) :	Possibly Occupational
Distance Education Approved:	No
Will this course be taught asynchronously?:	No
Course Control Number (CB00) :	CCC000590157
Curriculum Committee Approval Date:	10/25/2023
Board of Trustees Approval Date:	12/19/2023
Last Cyclical Review Date:	10/25/2023
Course Description and Course Note:	MUSIC 178 offers an introduction to sound recording, acoustics, digital audio, and signal processing. Students learn audio terminology, signal flow, audio hardware operation, digital audio workstation (DAW) operation, and audio engineering techniques. Hardware is studied including microphones, cables, monitors, recorders, consoles, and signal processors. Students experience hands-on use of current music production hardware and software. Students also learn about recording studio procedures, jobs in the recording industry, mixing techniques, mastering, post production, and the product manufacturing process.
Justification:	Mandatory Revision
Academic Career:	• Credit
Author:	• Tobin Sparfeld

Academic Senate Discipline

Primary Discipline:	• Music
Alternate Discipline:	
Alternate Discipline:	

Course Development

Basic Skill Status (CB08)

Course is not a basic skills course.

☐ Allow Students to Gain Credit by Exam/Challenge

Course Special Class Status (CB13)

Course is not a special class.

Pre-Collegiate Level (CB21)

Not applicable.

Grading Basis

- Grade with Pass / No-Pass Option

Course Support Course Status (CB26)

Course is not a support course

Transferability & Gen. Ed. Options

General Education Status (CB25)

Not Applicable

Transferability

Transferable to both UC and CSU

Transferability Status

Approved

C-ID	Area	Status	Approval Date	Comparable Course
CMUS	Commercial Music	Approved	08/30/2021	CMUS 130 X - Recording I

Units and Hours

Summary

Minimum Credit Units (CB07)	3
Maximum Credit Units (CB06)	3
Total Course In-Class (Contact) Hours	54
Total Course Out-of-Class Hours	108
Total Student Learning Hours	162

Credit / Non-Credit Options

Course Type (CB04)

Credit - Degree Applicable

Noncredit Course Category (CB22)

Credit Course.

Noncredit Special Characteristics

No Value

Course Classification Code (CB11)

Credit Course.

☐ Variable Credit Course

Funding Agency Category (CB23)

Not Applicable.

☐ Cooperative Work Experience Education Status (CB10)

Weekly Student Hours

Course Student Hours

In Class	Out of Class	
Lecture Hours	3	6
Laboratory Hours	0	0
Studio Hours	0	0

Course Duration (Weeks)	18
Hours per unit divisor	0
Course In-Class (Contact) Hours	
Lecture	54
Laboratory	0
Studio	0
Total	54
Course Out-of-Class Hours	
Lecture	108
Laboratory	0
Studio	0
Total	108

Time Commitment Notes for Students

No value

Pre-requisites, Co-requisites, Anti-requisites and Advisories

No Value

Entry Standards

Entry Standards

No value

Specifications

Methods of Instruction

Methods of Instruction	Lecture
Methods of Instruction	Discussion
Methods of Instruction	Multimedia
Methods of Instruction	Collaborative Learning

Methods of Instruction	Demonstrations
Methods of Instruction	Field Activities (Trips)
Methods of Instruction	Guest Speakers
Methods of Instruction	Presentations

Out of Class Assignments

- Reading
- Listening and analysis (e.g. listening to Sgt. Pepper's Lonely Hearts Club Band and providing a description of recording techniques that are heard)
- Exercises (e.g. edit and rearrange the words of recorded dialogue in a DAW)
- Projects (e.g. mix and bounce a multi-track session including the application of appropriate signal processing)

Methods of Evaluation	Rationale
Activity (answering journal prompt, group activity)	Class discussions and other group actifities
Project/Portfolio	Midterm project and exercise evaluations
Project/Portfolio	Final project evaluations
Exam/Quiz/Test	Midterm examinations
Exam/Quiz/Test	Final examinations

Textbook Rationale

No Value

Textbooks

Author	Title	Publisher	Date	ISBN
Huber, Miles	Modern Recording Techniques.	Routledge	2018	9781138203679

Other Instructional Materials (i.e. OER, handouts)

No Value

Materials Fee

No value

Learning Outcomes and Objectives

Course Objectives

Summarize the different roles and processes involved in recording.

Describe the principles of signal processing.

Explain microphone designs, characteristics, and applications.

Describe current audio recording procedures.

Explain sound, hearing, and acoustics concepts.

Discuss the differences in studio types and designs.

Explain the processes and equipment involved in analog recording.

Explain the processes, hardware, and software used in digital recording.

Explain current audio formats.

Describe audio console operation and basic mixing concepts.

Discuss speakers and monitoring concepts.

Summarize the mastering process and mastering techniques.

Recognize current methods of audio product manufacturing.

Explain proper signal flow in a recording system.

Describe common editing procedures and possibilities for recorded audio.

SLOs

Specify a complete audio recording system based on a given budget and project goals complete with signal flow and connection diagrams. Expected Outcome Performance: 70.0

Apply appropriate signal processing to mix and edit a multi-track audio project in a digital audio workstation, creating a stereo master of the session. Expected Outcome Performance: 70.0

Select appropriate microphones and determine their placement for a given variety of audio sources. Expected Outcome Performance: 70.0

Additional SLO Information

Does this proposal include revisions that might improve student attainment of course learning outcomes?

No

Is this proposal submitted in response to learning outcomes assessment data?

No

If yes was selected in either of the above questions for learning outcomes, explain and attach evidence of discussions about learning outcomes.

No Value

SLO Evidence

No Value

Course Content

Lecture Content

Overview of Modern Recording Industry (1.5 hours)
- Industry role of recording studios
- Recording industry jobs
- The recording process

Sound and Hearing (6 hours)
- Basics of sound
- Waveforms
- Loudness levels
- The ear and auditory perception
- Psychoacoustics

Studio Acoustics and Design (1.5 hours)
- Studio types
- Studio and control room acoustics
- Design factors in studios

Microphones (6 hours)
- Microphone designs
- Microphone characteristics
- Microphone preamps
- Microphone selection
- Microphone techniques and applications

Analog Tape Recording (1.5 hours)
- Magnetic recording and media
- Components and design of analog tape recorders
- Operation of analog tape recorders
- Maintenance of analog tape recorders and media
- Editing audio in analog

Digital Audio (1.5 hours)

- Basics of digital audio and the digital language
- Digital recording and reproduction process
- Digital recording systems
- Editing digital audio

Digital Audio Workstations (DAW) (8 hours)

- DAW hardware
- System connectivity
- Audio interfaces
- Recording and editing
- DAW controllers
- DAW software
- Sound file formats
- Optimizing DAW configurations
- DAW maintenance

MIDI (Musical Instrument Digital Interface) in the Recording Studio (3 hours)

- MIDI in contrast to recorded audio
- System connections and configurations
- Sequencing and editing
- Integrating MIDI into the recording process

Audio Formats and Multimedia (3 hours)

- Delivery media
- Delivery formats
- Perceptual coding
- MIDI, graphics, and desktop video

Audio Console Design and Mixing (6 hours)

- Analog console designs and functions
- Signal flow
- Digital console technology
- Virtual DAW mixers and automation
- Mixing and balancing basics

Signal Processing (6 hours)

- In-line vs. side-chain processing
- Equalization
- Dynamic processing
- Time-based signal processing
- Hardware vs. software based signal processing

Monitoring (3 hours)

- Monitoring environment considerations
- Speaker design and monitor speaker types
- Monitoring formats
- Monitoring techniques in the recording studio

Surround Sound (1 hour)

- Surround sound in the recording industry
- Surround formats and monitoring
- Surround mixing

Basics of Audio Mastering (3 hours)

- Mastering vs. mixing
- The process of mastering
- Signal processing in mastering

Survey of Audio Product Manufacturing Processes (1.5 hours)

- CD (compact disc) creation
- DVD (digital versatile disc) creation
- Vinyl disc creation
- Creation for virtual distribution

Total hours: 54