

MUS 078B: AUDIO RECORDING FUNDAMENTALS

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Originator

creba

Co-Contributor(s)**Name(s)**

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Justification / Rationale

We are re-designing and re-designating the Digital Audio Courses to conform to standards and best practices in the industry.

Effective Term

Fall 2020

Credit Status

Credit - Degree Applicable

Subject

MUS - Music

Course Number

078B

Full Course Title

Audio Recording Fundamentals

Short Title

RECORDING FUNDAMENTALS

Discipline**Disciplines List**

Music

Modality

Face-to-Face

Catalog Description

This course is an introduction to audio and music recording concepts, techniques, terminology and practices. Topics covered include acoustics, psychoacoustics, console/mixer topology, microphones, magnetism, audio processors, loudspeakers and recording software (Digital Audio Workstations).

Schedule Description

This course is an introduction to audio and music recording concepts, techniques, terminology and practices.
Advisory: MUS 021A

Lecture Units

2

Lecture Semester Hours

36

Lab Units

1

Lab Semester Hours

54

In-class Hours

90

Out-of-class Hours

72

Total Course Units

3

Total Semester Hours

162

Prerequisite Course(s)

Advisory: MUS 021A

Required Text and Other Instructional Materials**Resource Type**

Web/Other

Description

Instructor handouts

Resource Type

Book

Open Educational Resource

No

Author

David Miles Huber, Robert E. Runstein

Title

Modern Recording Techniques

Edition

9th

City

New York

Publisher

Taylor Francis

Year

2017

College Level

Yes

ISBN #

9781138954373

Class Size Maximum

20

Entrance Skills

Knowledge and familiarity with any music production software and techniques is beneficial, but not required.

Requisite Course Objectives

MUS 021A-Demonstrate knowledge of music notation theory: treble bass clefs, names of notes, key signatures in three keys, time signatures primary triads.

MUS 021A-Demonstrate playing of primary piano music.

Course Content

1. Basic Physics of Sound, Acoustics and Psychoacoustics
2. Basic Electronics and Electromagnetism: Ohms Law, voltage, resistance, current, power, transducers (piezoelectric, electromagnetic and capacitor based transducers)
3. Microphones: types, operating principles, polar patterns, usage techniques
4. Recording Console and Microphone Preamplifier Topologies
5. Basic recording studio signal flow
6. Basic Recording techniques and Digital Audio Workstations (DAW's)
7. Critical Listening

Lab Content

1. Group signal flow practice
2. Group recording projects
3. Individual Recording Projects

Course Objectives

	Objectives
Objective 1	Students will learn about the fundamentals of physics, acoustics, psychoacoustics and electricity as they relate to the recording studio and recording equipment.
Objective 2	Students will learn about the various types of microphones , how they work, their polar patterns and how they are used in the studio.
Objective 3	Students will learn about typical recording consoles (mixers) and their various elements and signal flow (i.e. microphone preamplifiers, equalizers (EQ), busses, auxes, etc...) and how outboard studio equipment is integrated with digital recording systems.
Objective 4	Students will learn about Digital Audio Workstations (DAW's) and their use in recording, editing and mixing digitally recorded audio signals.

Student Learning Outcomes

	Upon satisfactory completion of this course, students will be able to:
Outcome 1	Demonstrate a functional knowledge of basic acoustics, psychoacoustics, fundamentals of electricity, electromagnetism and their role in the recording studio.
Outcome 2	Demonstrate a functional knowledge of microphone types, operating principles, polar patterns, recording consoles, console topology, basic recording signal flow and their role in the recording studio and recording process.
Outcome 3	Demonstrate a basic skill set for studio recording including microphone selection, setup and placement, cable wrapping, proper gain stage usage, basic knowledge of Digital Audio Workstations, proper equipment usage, critical thinking/problem solving and studio etiquette.

Methods of Instruction

Method	Please provide a description or examples of how each instructional method will be used in this course.
Laboratory	Class lab time will be utilized to allow students to practice skills learned in class with instructor supervision and support.
Demonstration, Repetition/Practice	Activities such as cable wrapping, microphone stand setup and mic placement will primarily use this method where the instructor will demonstrate these skills and students will immediately replicate the instructor's actions.
Lecture	This course will have a significant lecture component for the first half of the semester to prepare students for the various projects to occur in the second half of the semester.

Methods of Evaluation

Method	Please provide a description or examples of how each evaluation method will be used in this course.	Type of Assignment
Laboratory projects	Students will engage in group and individual lab projects to practice and demonstrate knowledge of the topics covered in class. Topics will range from very simple signal flow demonstrations to various recording projects utilizing 1-5 sound sources/microphones. Students will spend approximately 2-3 hours outside of class per week on projects.	In and Out of Class
Presentations/student demonstration observations	Practicums: Students will be assessed through individual practicums where they are given a specific task or set of tasks to perform demonstrating their knowledge and proficiency with certain skills and practices.	In Class Only
Tests/Quizzes/Examinations	Because this course has a significant lecture and theoretical component, quizzes and exams will be employed to test student's knowledge of course concepts and materials. Most exam preparation will occur outside of class.	In and Out of Class

Assignments
Other In-class Assignments

1. Students will be evaluated on proper cable wrapping technique and microphone stand setup.
2. Students will have to record a single source with one microphone demonstrating appropriate gain staging, equipment setup and microphone placement.

Other Out-of-class Assignments

Students will be given projects as groups and individuals to record various sources of audio usage various types of microphones. These projects will be completed in and out-of-class.

Grade Methods

Letter Grade Only

MIS Course Data
CIP Code

10.0203 - Recording Arts Technology/Technician.

TOP Code

100500 - Commercial Music

SAM Code

C - Clearly Occupational

Basic Skills Status

Not Basic Skills

Prior College Level

Not applicable

Cooperative Work Experience

Not a Coop Course

Course Classification Status

Credit Course

Approved Special Class

Not special class

Noncredit Category

Not Applicable, Credit Course

Funding Agency Category

Not Applicable

Program Status

Program Applicable

Transfer Status

Transferable to CSU only

Allow Audit

No

Repeatability

No

Materials Fee

No

Additional Fees?

No

Approvals**Curriculum Committee Approval Date**

11/05/2019

Academic Senate Approval Date

11/14/2019

Board of Trustees Approval Date

12/19/2019

Chancellor's Office Approval Date

1/05/2020

Course Control Number

CCC000611425

Programs referencing this course

Music Technology Certificate of Achievement (<http://catalog.collegeofthedesert.eduundefined?key=154/>)

Basic Commercial Music Certificate of Achievement (<http://catalog.collegeofthedesert.eduundefined?key=218/>)