

MUS 078C: LIVE SOUND REINFORCEMENT I

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

078C

Full Course Title

Live Sound Reinforcement I

Short Title

LIVE SOUND I

Discipline**Disciplines List**

Music

Modality

Face-to-Face

Catalog Description

This course is an introduction to live sound reinforcement. Topics will primarily be focused on reinforcement for live music performance, but will also touch upon public address systems, live sound for theatrical productions, sound system design and maintenance.

Schedule Description

This course is an introduction to live sound reinforcement for live music performance.
Advisory: MUS 078B

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 078B

Class Size Maximum

20

Entrance Skills

Knowledge of microphone types, operating principles and polar patterns.

Requisite Course Objectives

MUS 078B-Students will learn about the various types of microphones , how they work, their polar patterns and how they are used in the studio.

Entrance Skills

Knowledge of audio signal flow and gain structure.

Requisite Course Objectives

MUS 078B-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.

Entrance Skills

Knowledge of recording software.

Requisite Course Objectives

MUS 078B-Students will learn about the fundamentals of physics, acoustics, psychoacoustics and electricity as they relate to the recording studio and recording equipment.

MUS 078B-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.

MUS 078B-Students will learn about Digital Audio Workstations (DAW's) and their use in recording, editing and mixing digitally recorded audio signals.

Entrance Skills

Knowledge of basic acoustics.

Requisite Course Objectives

MUS 078B-Students will learn about the fundamentals of physics, acoustics, psychoacoustics and electricity as they relate to the recording studio and recording equipment.

Course Content

1. Live sound consoles (digital and analog) overview
2. Loudspeaker design and use for live sound reinforcement
3. Monitors vs. front of house
4. Microphone design and use for live sound systems
5. Cabling, stands, stage boxes and proper stage setup for live sound reinforcement
6. Room acoustics and room tuning for live sound reinforcement
7. Line array loudspeaker systems vs. traditional point source systems

8. Audio processors and effects for live sound reinforcement
9. Safety and hearing preservation (OSHA standards)

Lab Content

Lab time will be used to explore practical use and application of concepts discussed during the lecture portions of the course. Students will practice, in real world scenarios, stage setup and layout, system tuning, mic placement, proper gain staging, speaker placement and angles, stage monitor setup and operation, and full band/ensemble sound reinforcement scenarios.

Course Objectives

Objectives	
Objective 1	Identify and describe the primary differences between a typical recording console and a live sound console.
Objective 2	Identify and describe the types of loudspeakers used in a typical PA system for music.
Objective 3	Identify and describe microphone types and their usage in live sound.
Objective 4	Properly, and safely, set up and tear down a live sound reinforcement system for music.
Objective 5	Understand how room acoustics impact PA system operation, including how to adjust (tune) a PA system to a specific venue.
Objective 6	Learn and adopt safety standards for PA system setup and operation.

Student Learning Outcomes

Upon satisfactory completion of this course, students will be able to:	
Outcome 1	Students will be able to identify and describe the essential components of a live sound reinforcement system (music PA system).
Outcome 2	Students will demonstrate the ability to appropriately create a PA setup, tune and operate a PA system for music live sound reinforcement.
Outcome 3	Students will demonstrate critical thinking skills using their knowledge of live sound reinforcements systems and procedures to evaluate, troubleshoot and correct malfunctions and common issues inherent in live sound reinforcement.

Methods of Instruction

Method	Please provide a description or examples of how each instructional method will be used in this course.
Experiential	Students will be placed in "real world" situations during the semester where they will have to use the skills learned in the course to operate a live sound system for performances on and off-campus under instructor supervision.
Lecture	Lectures will be used to disseminate fundamental information about the various components, concepts and facets of live sound reinforcement.
Laboratory	Laboratory time will be used to put into practice the concepts covered in the lecture portion of the course.
Technology-based instruction	This course is heavily reliant on specific technology for this subject. Much of the demonstration components of the course will be done with the myriad technological components relevant to modern live sound reinforcement systems.
Demonstration, Repetition/Practice	Lab time will primarily be spent with the instructor demonstrating specific skills (i.e. cable wrapping, stand setup, mic placement, room tuning, etc...) with students repeating and practicing those skills immediately afterwards under instructor supervision.

Methods of Evaluation

Method	Please provide a description or examples of how each evaluation method will be used in this course.	Type of Assignment
Oral and practical examination	Students will be evaluated on their practical and evaluative skills through periodic practicums and skills demonstrations conducted by the instructor. These practicums will be both group and individual evaluations held during class and through out-of-class performances. Each student will be required to participate in 2-3 out-of-class performances during the semester. These will be comprised of on-campus and off-campus events organized by the instructor and Music Department.	In and Out of Class
Tests/Quizzes/Examinations	Students will be evaluated on their theoretical knowledge of the subject matter via written examinations on various topics introduced throughout the semester.	In Class Only

Assignments
Other Out-of-class Assignments

Students will be assigned to attend a concert of their choosing in a venue that utilizes some kind of live sound reinforcement. They will evaluate the usage and components of the system and write a short report about it.

Students will also be given opportunities to engage in activities outside of the classroom during the semester.

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

CCC000611426

Programs referencing this course

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

Advanced Commercial Music Certificate of Achievement (<http://catalog.collegeofthedesert.eduundefined?key=219/>)