MTEC 86A: SOUND REINFORCEMENT & EVENT STREAMING

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2023
Units:	4
Hours:	3 lecture, 3 laboratory per week (72 total per quarter)
Advisory:	Not open to students with credit in MUS 62.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade (Request for Pass/No Pass)
Repeatability:	Not Repeatable
Formerly:	MUS 62

Description

Setup and operation of sound reinforcement and live streaming systems for musical performances and event production. Basic design and operation of digital mixing boards and live streaming systems. Microphone type, design, construction, and selection. Loudspeaker monitor systems and their application with musical groups and event production. Audio-over-IP applications for sound reinforcement and event production. Stereo and multichannel recording techniques. Practice with live musicians in practice and performance settings.

Course Objectives

The student will be able to:

a. Design systems for sound reinforcement and streaming applications
b. Set up and operate sound reinforcement and live streaming systems for both musical performances and event production

Course Content

a. Study and analysis of sound reinforcement and live streaming systems
    i. Smaller systems that do not require a separate monitor mix
    ii. Larger systems that require one or more monitor mixes
b. Design and implementation of sound reinforcement and live streaming systems for performing groups and events
    i. Music performances with varying instrumental and vocal alignments
    ii. Event production that requires traditional sound reinforcement as well as audio and video streaming
c. Operation of sound reinforcement and live streaming systems in both practice and live settings
d. Interpret specifications for sound reinforcement and live streaming equipment
    i. Microphone selection based on the sound source
    ii. Microphone pattern selection based on acoustic environmental considerations
    iii. Speaker placement based on acoustic design
    iv. Monitor placement and level settings based on interaction with the performer

Lab Content

Lab content includes topics such as digital console and live streaming system workflow, Audio-over-IP technologies, microphone selection and placement, gain settings, monitor system setup, amplification calculations based on room size, etc. Other topics may include number of plug-ins per insert track, bus assignments for efficient recording operation, and mastering compression settings.

Special Facilities and/or Equipment

1. Digital mixing console
2. Live streaming hardware and/or software
3. At least two main speakers
4. At least four monitor speakers
5. At least 10 dynamic microphones with stands and clips
6. Appropriate and functional cables for microphones and speaker systems, including data cabling for Audio-over-IP applications
7. Adequate broadband internet connection for streaming applications
8. When taught online: ongoing access to computer with email software and capabilities; access to microphones, speakers, and a mixing console; access to musicians who can perform for sound reinforcement purposes; adequate broadband internet connection for streaming applications

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Written assignments demonstrating the student's ability to design sound reinforcement and live streaming systems
Graded lab assignments demonstrating the student's ability to operate sound reinforcement and live streaming systems in both practice and performance situations
Written examinations that compare and contrast sound reinforcement and live streaming systems

Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Lecture presentations that demonstrate setup and operation of sound reinforcement and live streaming systems
Classroom discussions that compare and evaluate sound reinforcement and live streaming systems
Group presentations followed by in-class discussion and evaluation

Representative Text(s) and Other Materials

Boyce, Teddy. Introduction to Live Sound Reinforcement: The Science, the Art, and the Practice. 2020.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

a. Written critiques and analyses of sound reinforcement and live streaming projects
b. Written summaries documenting technical and artistic elements for corresponding submitted assignments and audio projects
c. Written proposals, session logs, learning outcomes, and reflections

Discipline(s)

Commercial Music