

# MUS 0018 - LIVE SOUND

## Catalog Description

Advisory: Completion with grade of "C" or better or concurrent enrollment in MUS 16

Hours: 72 (18 lecture, 54 laboratory)

Description: Training provided in a variety of public event technical support scenarios where sound reinforcement is required, including live musical performance, theatrical production, AV/multimedia, and corporate event support. Students will receive introductory training in sound system components and configuration, venue and event evaluation, production techniques and logistics, and production-related business practices. Students will engage in hands-on training in PA system setup, operation, troubleshooting, teardown, transport, and maintenance procedures. (CSU)

## Course Student Learning Outcomes

- CSLO #1: Evaluate a venue/event and determine production needs addressing:\nA. Venue size, configuration, anticipated attendance, etc.\nB. Nature of event (musical/theatrical performance)
- CSLO #2: Produce a two-part Equipment Rental Agreement / Event Staff Service Contract addressing the needs of one of four hypothetical public event scenarios.
- CSLO #3: Demonstrate proper and efficient PA system configuration, transport, setup, tuning, operation, tear down, and maintenance for various size\nevents.

## Effective Term

Spring 2021

## Course Type

Credit - Degree-applicable

## Contact Hours

72

## Outside of Class Hours

36

## Total Student Learning Hours

108

## Course Objectives

Lecture Objectives:

1. Evaluate a venue/event and determine production needs addressing:
  - A. Venue size, configuration, anticipated attendance, etc.
  - B. Nature of event (musical/theatrical performance, AV, corporate, etc.)
2. Interpret and work with technical event support documentation tailored to specific events:
  - A. Tech riders
  - B. Stage plots/diagrams
  - C. Input lists
  - D. Service contracts
  - E. Equipment rental agreements
  - F. Local and regional safety codes

- G. Production entity, venue, and event insurance
3. Demonstrate a grasp of event production logistics
4. Identify an equipment/service package (rental agreement & service contract) to address a venue/client's needs and the production requirements of a variety of events
5. Explain the ability to work with other event staff, talent, attendees, etc.

Laboratory-Activity Objectives:

1. Demonstrate a working knowledge of:
  - A. Amplification systems, loudspeakers, and cabling
  - B. Analogue and digital mixing systems and operational concepts
  - C. Hardware and virtual outboard signal processing systems
2. Demonstrate the ability to work effectively with a variety of small to medium-size PA gear/systems
  - A. Safe transport
  - B. Load-in
  - C. Set up
  - D. Line check
  - E. Soundcheck
  - F. Operations
  - G. Troubleshooting; electrical interference abatement
  - H. Tear down

## General Education Information

- Approved College Associate Degree GE Applicability
- CSU GE Applicability (Recommended-requires CSU approval)
- Cal-GETC Applicability (Recommended - Requires External Approval)
- IGETC Applicability (Recommended-requires CSU/UC approval)

## Articulation Information

- CSU Transferable

## Methods of Evaluation

- Objective Examinations
  - Example: 1. Students will be given periodic spot quizzes where retention and application of course content will be tested. For example: Identify three types of transducers and their function. 2. A midterm and comprehensive final will be administered where students will be assessed on their grasp of key concepts introduced during instruction. Example: Describe three issues in amplification.
- Projects
  - Example: Students will produce a two-part Equipment Rental Agreement/Event Staff Service Contract addressing the needs of one of four hypothetical public event scenarios: This is graded with a rubric. 1. A theatrical play requiring general technical support (lobby music, clear-com connectivity, environmental and cue-based sound effects, etc.) 2. An indoor or outdoor large ensemble performance event (example: a vocal performance group or musical theatre performance company production backed by a minimum 10-piece pit orchestra) 3. An indoor or outdoor multi-artist small ensemble performance event (example: multiple 3 to 5-piece combo bands) 4. An indoor multi-presentation multimedia public address (AV) event (example: a spoken word event with multimedia support - Audio/Video feeds from multiple computers / tablets, etc.)
- Skill Demonstrations
  - Example: Students will be engaged in audio signal routing, management, and processing exercises. For example: Embed audio that includes appropriate mixing, demixing, sampling rate

and polarity conversion, remapping, audio level adjustment, and delay. This is graded with a rubric. 2. Under instructor supervision, small student groups (maximum – 5) will set up, tune, test, and dismantle a small-format PA system.

## Repeatable

No

## Methods of Instruction

- Laboratory
- Lecture/Discussion
- Distance Learning

Lab:

1. Students will be engaged in PA system configuration, transport, setup, tuning, operation, teardown, and maintenance exercises.
2. Under instructor supervision, scenarios requiring PA system troubleshooting will be introduced – Small groups of students will address the challenge of correcting the issues as they are encountered.

Lecture:

1. Instructor will offer integrated lecture and demonstration on the nature of various venue characteristics and event scenarios encountered. Students are expected to actively engage in the lecture.
2. Instructor will offer integrated lecture and demonstration on the professional practices necessary to tailor an equipment rental agreement and live event technical support service contract to varying venues and event scenarios. Students will then compare and contrast the two.

## Typical Out of Class Assignments

### Reading Assignments

1. Students will be required to read and report on an article or technical publication on a piece of PA equipment
2. After reading a specifications sheet, students will make comparisons of spec sheet data on comparable professional audio products

### Writing, Problem Solving or Performance

1. Students will write three concert reports focusing on venue acoustic properties and/or sound reinforcement issues as applicable.
2. Students will be given a budget and asked to create a comprehensive equipment list for a small to medium-format sound reinforcement system. Students will be required to provide both a targeted area of professional activity within the industry and a rationale for equipment choices.

## Other (Term projects, research papers, portfolios, etc.)

### Required Materials

- Master Handbook of Acoustics
  - Author: F. Alton Everest, Ken C. Pohlmann
  - Publisher: McGraw Hill
  - Publication Date: 2015
  - Text Edition: 6th
  - Classic Textbook?: No

- OER Link:
- OER:
- Sound Reinforcement Handbook
  - Author: Greg Davis, Ralph Jones
  - Publisher: Hal Leonard
  - Publication Date: 2008
  - Text Edition: 3rd
  - Classic Textbook?: No
  - OER Link:
  - OER:
- The Ultimate Sound Operator's Handbook
  - Author: Bill Gibson
  - Publisher: Music Pro Guide
  - Publication Date: 2011
  - Text Edition: 2nd
  - Classic Textbook?: No
  - OER Link:
  - OER:

**Other materials and-or supplies required of students that contribute to the cost of the course.**