

College of San Mateo
Official Course Outline

1. **COURSE ID:** DGME 118 **TITLE:** Digital Audio Production
Units: 3.0 units **Hours/Semester:** 40.0-45.0 Lecture hours; 24.0-27.0 Lab hours; and 80.0-90.0 Homework hours

Method of Grading: Grade Option (Letter Grade or P/NP)

Recommended Preparation:

Eligibility for ENGL 838 or ENGL 848

2. **COURSE DESIGNATION:**

Degree Credit

Transfer credit: CSU

3. **COURSE DESCRIPTIONS:**

Catalog Description:

Students get hands-on experience in audio production and the basic operation of professional audio equipment. Covers basic microphone techniques, recording in the studio and field, and broadcast production. Students will gain a practical understanding of digital audio recording, mixing, and editing. Includes an introduction to digital audio editing software.

4. **STUDENT LEARNING OUTCOME(S) (SLO'S):**

Upon successful completion of this course, a student will meet the following outcomes:

1. Demonstrate ability to record
2. Demonstrate basic audio mixing
3. Demonstrate proper microphone selection and placement for various recording situations

5. **SPECIFIC INSTRUCTIONAL OBJECTIVES:**

Upon successful completion of this course, a student will be able to:

1. Demonstrate ability to record
2. Demonstrate basic audio mixing
3. Demonstrate proper microphone selection and placement for various recording situations

6. **COURSE CONTENT:**

Lecture Content:

- Introduction to Sound (SLO 1)
 - Hearing and sound perception
 - Sound waves, properties, interaction
 - Elements of sound
 - Audio aesthetics
- Radio Station Practices (SLO 2)
 - Audio production for radio stations
 - Audio for radio specifications
 - Radio programming, station formats (a station's "sound")
- Radio today: internet radio, satellite radio, terrestrial broadcast, HD radio
- Microphones (SLO 4)
 - Transduction and diaphragms
 - Types of Mics: dynamic, condenser, ribbon, crystal
 - Directional Properties and pick up patterns
 - Frequency Response
 - Mic Level vs Line Level
- Recording (SLOs 3 & 4)
 - Analog to Digital
 - Mic selection & positioning
 - Acoustics
 - Types of recording equipment and formats
 - Studio recording
 - Field recording
 - Mastering

- Mixers (SLO 3)
 - Input Channels: Gain/Attenuation, Phantom Power, EQ, Aux, Pan, Solo, Slider
 - VU Meter & PPM, monitoring
 - Subgroups
 - Outputs
- Controlling sound (SLO 3 & 4)
 - Distortion and Feedback
 - Equalization
 - Processing, Compression, Limiting, Expansion
 - Audio Effects: Reverb, Phasing, Flanging, Chorus
- Editing (SLO 3)
 - Types of digital audio files
 - Audio editing, making sound visual
 - Audio editing software
 - Cutting, Fading, Crossfades

Lab Content:

Lab time is used for hands-on training in operating professional audio equipment for recording, mixing, and editing. Students also use lab time to complete production assignments.

7. REPRESENTATIVE METHODS OF INSTRUCTION:

Typical methods of instruction may include:

- A. Lecture
- B. Lab
- C. Other (Specify):
 1. Lecture will introduce new material and concepts to the students and provide a survey of radio industry operational practices and programming. One half of the lecture time is done in a Smart classroom. This allows the instructor to use audio/visual examples and discuss overarching audio principles
 2. Demonstration: the second half of lecture is done in the recording studio and audio labs to demonstrate the appropriate use of mics, and recording and mixing equipment
 3. Readings will reinforce and/or supplement lecture information
 4. Production lab assignments: lab time will be completed in audio labs in, where students will apply their learning in production assignments, using professional audio equipment and computer applications
 5. Studio recording assignments: students will be required to set up and record a studio-based performance (controlled environment)
 6. Field recording assignments: students will record natural sound and interviews in a uncontrolled environment
 7. Lessons in aesthetics: assignments will include application of audio aesthetics
 8. Reflection essays on audio production experience and self-assessment of skills

8. REPRESENTATIVE ASSIGNMENTS

Representative assignments in this course may include, but are not limited to the following:

Writing Assignments:

Studio recording assignments: students will be required to set up and record a studio-based performance (controlled environment)

Field recording assignments: students will record natural sound and interviews in a uncontrolled environment

Reading Assignments:

Readings will reinforce and/or supplement lecture information. Readings may be from a textbook, handout, or online.

9. REPRESENTATIVE METHODS OF EVALUATION

Representative methods of evaluation may include:

- A. Class Work
- B. Exams/Tests
- C. Homework
- D. Lab Activities
- E. Projects
- F. Quizzes
- G.
 1. Exams on key information and concepts in audio production and radio programming
 2. Hands-on testing of skills in microphone selection, set-up and placement, recording, and operating mixers
 3. Oral presentation of ideas and expression of independent views
 4. Participation in small group projects
 5. Radio production assignments will be evaluated by instructor and assessed for improvement and skill mastery in recording, mixing, and editing
 6. Informal writing in the form of critiques of radio programming

10. **REPRESENTATIVE TEXT(S):**

Possible textbooks include:

- A. Bobby Owsinski. *The Recording Engineer's Handbook*, 3rd ed. Course Technology PTR, 2013
- B. Cook, F.. *Pro Tools 101: An Introduction to Pro Tools 11*, 1st ed. Cengage Learning, 2013

Other:

- A. A free, online text has been adopted: <http://www.mediacollege.com/audio/>
- B. MediaCollege.com is a free educational website containing tutorials, reference and other resource material in all areas of electronic media production.
- C. MediaCollege.com Terms and Conditions: <http://www.mediacollege.com/home/terms.html>

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Course Originator: Michelle Brown