College of San Mateo
Official Course Outline

1. **COURSE ID:** MUS. 389 **TITLE:** Recording for Musical Applications II
   Units: 3.0 units **Hours/Semester:** 32.0-36.0 Lecture hours; 48.0-54.0 Lab hours; 64.0-72.0 Homework hours; 144.0-162.0 Total Student Learning hours
   Method of Grading: Grade Option (Letter Grade or Pass/No Pass)
   Prerequisite: MUS. 289

2. **COURSE DESIGNATION:**
   Degree Credit
   Transfer credit: CSU; UC

3. **COURSE DESCRIPTIONS:**
   Catalog Description:
   A continuation of MUS 289 Recording for Musical Applications. Students develop critical listening skills and apply advanced studio techniques through recording a variety of musical instruments, vocalists, and ensembles in a professional recording studio. Focus on honing recording skills in addition to the implementation of signal processing, including application of EQ, dynamic and time-based processors.

4. **STUDENT LEARNING OUTCOME(S) (SLO'S):**
   Upon successful completion of this course, a student will meet the following outcomes:
   1. Independently direct all stages of a multi-track recording session, including initial communication with recording artists through the recording process and audio post production, while demonstrating professional and accurate communication of logistics, technical details, and artistic decisions.
   2. Identify various types of audio signal processors and their function in audio production.
   3. Critically listen and analyze a sound recording using identified perceptual attributes and recommend appropriate signal processing to achieve optimal results.
   4. Apply complementary signal processing techniques to achieve desired technical and creative outcomes.

5. **SPECIFIC INSTRUCTIONAL OBJECTIVES:**
   Upon successful completion of this course, a student will be able to:
   1. Independently direct all stages of a multi-track recording session including initial communication with recording artists through the recording process and audio post production while demonstrating professional and accurate communication of logistics, technical details, and artistic decisions.
   2. Identify various types of audio signal processors and their function in audio production.
   3. Critically listen and analyze a sound recording using identified perceptual attributes and recommend appropriate signal processing to achieve optimal results.
   4. Apply complementary signal processing techniques to achieve desired technical and creative outcomes.

6. **COURSE CONTENT:**
   Lecture Content:
   1. Advanced Mixing Console Usage
      A. Inserts
      B. Subgroups
      C. DCAs
      D. Creating a routing template on a digital console
   2. Advanced Microphone Techniques
      A. Single mic, multi-mic and stereo array techniques
   3. Outboard Gear
      A. Microphone preamplifiers
      B. Dynamic processors
      C. Equalizers
      D. Time-based signal processors
   4. Digital Audio Workstation (DAW) Control Surfaces
   5. Troubleshooting in the Studio
      A. Review of signal flow in the studio
      B. Determining cables/connectors needed for optimal signal transmission
      C. Using lists, charts and diagrams to document session connections

6. The Proper Monitoring Environment
    A. Speaker placement
    B. Determining the listening position
    C. Closed vs. open-back headphones
    D. Calibrating speakers and/or headphones
7. Signal Processing
    A. Equalizers
        a. Managing tonal balance
        b. Parameters of EQs
    B. Dynamic Processors
        a. Managing dynamics with compressors, limiters, gates and/or expanders
        b. Parameters of compressors, limiters, gates and/or expanders
    C. Time-based Processors
        a. Creating ambience with reverb and delay
        b. Parameters of reverbs and delays
    D. Other Common Signal Processors
8. Ear Training
    A. Detect specified boosts and cuts across the frequency spectrum
    B. Detect stereo width and pan position
    C. Detect amplitude level differences in decibels
    D. Assess sources of audible distortion in an audio signal
9. Using Reference Tracks
    A. Requesting reference tracks from clients
    B. Using reference tracks to guide technical and creative decisions
10. Client Communication & Studio Etiquette
    A. When/what/how to communicate with a client before, during, and after a session
    B. Set and manage client expectations before, during, and after a session
    C. Project assets and deliverables
    D. Asset delivery methods
    E. Redundant back-ups

Lab Content:

Lab work consists of hands-on recording sessions with a variety of musical artists and ensembles in CSM's Studio A. Specific instruments, musical styles and ensembles may vary each time the class is offered. Throughout the semester, students will practice:

1. Making decisions about microphone choice and placement
    A. Select microphones based on practical and stylistic considerations
    B. Implement microphone placement techniques to optimize sound quality and musical expression
2. Making proper studio connections
    A. Patch microphones to mixing console input channels
    B. Connect headphone mixing stations
    C. Other instrument or audio connections
3. Operating a mixing console for recording and monitoring recording tracks
    A. Use the talkback system to communicate with recording artists in the booth or live room
    B. Use channel strip controls to manage input signals
        a. Set proper preamplifier gain levels
        b. Apply polarity reversal when needed
        c. Apply high pass filter when needed
    C. Create a monitor or headphone mix using auxiliary sends
    D. Utilize subgroups or DCAs when needed
4. Using a digital audio workstation (DAW) to capture recorded multitracks
    A. Set up track I/O for a multitrack recording session
    B. Create a template for recording
    C. Set up a click track for a recording artist or ensemble
    D. Record overdubs
    E. Use take folders to manage multiple takes
5. Editing recorded multitracks in a DAW:
    A. Comp vocal or instrumental takes
    B. Apply fades to clip regions
    C. Apply EQ to input signals using the console
    D. Apply EQ to recorded tracks using DAW plugins

E. Apply dynamics processing to input signals using the console
F. Apply dynamics processing to recorded tracks using DAW plugins
G. Apply time-based processing to input signals using the console
H. Apply time-based processing to recorded tracks using DAW plugins
I. Export audio recordings at a variety of digital audio resolution settings

7. **REPRESENTATIVE METHODS OF INSTRUCTION:**
Typical methods of instruction may include:
A. Lecture
B. Lab
C. Activity
D. Field Trips
E. Guest Speakers
F. Observation and Demonstration

8. **REPRESENTATIVE ASSIGNMENTS**
Representative assignments in this course may include, but are not limited to the following:
Writing Assignments:
Short reports describing the strategies and techniques implemented in recording activities and projects.
Reading Assignments:
Weekly readings from assigned texts including the textbook, equipment and software manuals, equipment and software reviews, and articles on audio engineering principles.
Other Outside Assignments:
- Lab Assignments
- Ear Training Assignments
- Recording Assignments
- Audio Editing Assignments

9. **REPRESENTATIVE METHODS OF EVALUATION**
Representative methods of evaluation may include:
A. Class Participation
B. Class Work
C. Exams/Tests
D. Group Projects
E. Homework
F. Lab Activities
G. Projects
H. Quizzes

10. **REPRESENTATIVE TEXT(S):**
Possible textbooks include:
A. Owinski, B.. *The Recording Engineer's Handbook*, 5th ed. Bobby Owsinski Media Group, 2023
B. Corbett, I.. *Mic It! Microphones, Microphone Techniques, and Their Impact on the Final Mix*, 2nd ed. New York: Routledge, 2020
C. Senior, M.. *Recording Secrets for the Small Studio*, 2nd ed. New York: Routledge, 2022

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Course Originator: Adria Otte