AUD-141: STUDIO RECORDING

Effective Term
Fall 2024

BOT Approval Date
03/09/2023

Discipline
AUD - Audio Production

Course Number
141

Course Title
Studio Recording

Short Title
Studio Recording

Credit Status (CB 04)
D - Credit - Degree applicable

Units

Activity Units
3.00

Total Units
3.00

Hours

Activity Contact Hours
96-108

Out of Class Hours Activity
48-54

Total Contact Hours
96 - 108

Total Out of Class Hours
48 - 54

Total Student Learning Hours
144 - 162

Distance Education
No

Catalog Description
This course offers hands-on instruction in multitrack recording techniques, audio hardware configurations, microphone technology, digital and analog signal processing, digital control surfaces, preamplifiers, synchronization, and audio ethernet controls within a studio context.

Requisites

Prerequisite(s)

Prerequisite(s) (must be taken before)
AUD-143/MUS-143 (with a grade of C or better).

Recommended Preparation

Recommended Preparation (note that students can enroll in the class even if they haven't take the recommended course)
AUD-140

Codes

TOP Code (CB 03)
1005.00* - *Commercial Music

CIP Code
10.0203 - Recording Arts Technology/Technician.

Student Accountability Model (SAM) Priority Code (CB 09)
C - Clearly Occupational

Noncredit Category (CB 22)
Y - Credit Course

Repeatability Code
No

Grading Option
Letter grade OR P/NP

Minimum Qualifications

Minimum Qualifications	And/Or
Commercial Music	End

CSU Area(s)

Approved CSU Area
C1

IGETC Area(s)

Learning Objectives

Learning Objectives

Learning Objective
1. Document audio signal flow when presented with either an analog or digital recording system.
2. Analyze microphone characteristics and apply them to the appropriate vocal and instrumental recordings.
3. Analyze audio interfaces and compare input and output configurations.
4. Evaluate how critical ear training helps to evaluate sound engineering decisions.
5. Appraise the function of SMPTE timecode and its relevance to a mixdown.
6. Work in groups to record, mix, and bounce-down projects in various file formats.
7. Produce a mixdown using 3-dimensional techniques (FEEP).
8. Compare and contrast sound recordings from diverse cultures to bring attention to ways sound engineers approach sound from non-western standards.

Learning Outcome Information

Course Learning Outcomes

Learning Outcome
1. Students will analyze the 5 points of audio pertaining to System 5 mix console using the AVID Pre'.
2. Students will understand the two types of cable choices within an audio system.
3. Students will evaluate the basic 5-band breakdown of channel equalizer.

Program Learning Outcomes

Learning Outcome
Integrate theory with technical skill in audio-based productions.
Devise innovative solutions to workflow-related problems.
Analyze the implications of technology changes on the audio industry.
Apply appropriate recording devices and methods in new, industry-relevant contexts.
Interpret and produce audio content in a culturally responsive manner.

Institutional Learning Outcomes

Aesthetic Awareness: The student will identify and evaluate how aesthetic expression leads to an appreciation of social and cultural context as well as the values of art and nature.
Communication: The student will effectively express and exchange ideas through listening, speaking, reading, writing, visual works, and other modes of interpersonal expression.
Critical Thinking: The student will analyze problems, gather and synthesize relevant information, evaluate ideas, information, and evaluate alternative points of view to create, innovate and implement effective solutions.
Cultural Awareness and Humility: The student will demonstrate knowledge of and sensitivity toward individuals of diverse ethnicity, age, gender, sexual orientation, and religious affiliations, as well as toward those individuals with diverse abilities and socio-economic classes to respectfully interact with individuals of diverse perspectives, beliefs and values while being mindful of the limitation of their own cultural frameworks.
Information and Technology Literacy: The student will access, interpret, evaluate, and apply relevant information sources and digital media effectively, and in an ethical and legal manner.
Social Awareness: The student will recognize and analyze the interconnectedness of global, national, and local concerns, analyzing cultural, political, social, and environmental issues from multiple perspectives and appreciate similarities and differences among cultures.
Civic
Personal
and Professional Responsibility

Content

Course Activity Content

1. Analysis of recording systems
    a. Signal flow
        i. Analog-based systems
        ii. Digital-based systems
    b. Recorders
        i. Linear
        ii. Non-linear
    c. Digital Audio Workstations (DAW)
        i. Digital Control Surface (Avid System 5)
        ii. The Patch Bay
    d. Hardware
        i. Pro Tools HD Omni
        ii. Pro Tools HD I/O
        iii. Pro Tools HD Synch
        iv. Pro Tools Pres's
    e. Understanding Global perspectives
        i. 1. How recording studio dynamics change with culture
        ii. Techniques used to record sacred, folk, and ethnic sounds to preserve cultural continuity

iii. Learning to become equity minded sound engineers
1. Identifying cultural bias when working with clients
2. Learning to remove implicit and explicit bias from mixing choices

2. Microphones
   a. Directionality
      i. Omni
      ii. Figure-eight
      iii. Cardioid, super, hyper
      iv. Bi-directional
   b. Types
      i. Condenser
      ii. Ribbon
      iii. Dynamic
   c. Microphone techniques
      i. Appropriate characteristics
      ii. Placement
3. Critical Listening
   a. Technical Ear Training
      i. Isomorphic Mapping
      ii. Increasing Awareness
      iii. Increasing Speed of Detection
   b. Shaping Sounds
   c. Sound Reproduction
      i. Mono
      ii. Stereo
      iii. Headphones
      iv. Multichannel Reproduction
4. Timecode
   a. SMPTE
   b. Frame rates
   c. Other types
   d. The timecode windows
5. Mixing
   a. Levels
   b. Solo tracks
   c. Vocal tracks
   d. Scratch tracks
   e. Signal processing
   f. Mono mix
   g. Stereo Mix
   h. Equalizing
   i. Automation
6. 3-Dimensional Recording/Mixing
   a. Gain-to-Fader relationship
   b. Equalization
   c. Effects
   d. Pan
7. Foley Recording
   a. History
   b. Techniques

Methods of Instruction

Method

Discussion

Integration

Students will participate in weekly discussions topics that apply practical and theoretical concepts from class lectures. Topics range from opinions on current trends in audio technology to assessments of videos that describe technical information that build a narrative for class discussion and analysis.

Method

Visiting Lecturers

Integration

Industry specialists and guest lectures will be invited to demonstrate a variety of cultural instruments and their role in preserving cultural nuances through sound demonstrations.

Method

Observation and Demonstration

Integration

Demonstrations will help students observe the following areas: multi-track recording, audio hardware configurations, microphone technology, digital and analog signal processing, digital control surfaces, preamplifiers, synchronization, and audio ethernet controls

Methods of Evaluation

Method

Exams/Tests

Integration

Test and exams will encompass concepts and technical terminologies related to the digital audio workstations (DAW) covered in class sessions. The exam format may include essay, listening, short answer, multiple choice, and true false questions. The exams and tests will be used to measure the student's comprehension of effects units, live sound applications, monitor types and their placement.

Method

Role-playing/Simulation

Integration

Simulated mock recording sessions, will act as equipment exams that will measure the student's comprehension. Students will create a Pro Tools Session, create and label tracks, assign the correct inputs and outputs, record on separate microphones, send the signals for effects processing, and lastly, send the signals for headphone monitoring.

Method

Research Projects

Integration

Students will participate in a research project that explores the cultural impact that sound has had in non-western countries (such as South Africa and the Middle East). Topics range from opinions on current geopolitical issues involving sound recording and the dynamics between artists and their local recording industry. Students will be evaluated on the quality of their research and in their ability to view the audio world in a way that extends beyond their own cultural comforts.

Assignments

Assignment Type

Writing

In-class and/or outside of class

Outside of class

Formative or Summative

Formative

Assignment

In this writing assignment, we will be diving into the world of Bit-Depth. Bit depth determines the number of possible amplitude values we can record for each sample. The most common audio bit depths are 16-bit, 24-bit, and 32-bit. Each is a binary term, representing a few possible values. Systems of higher audio bit depths are able to express more possible value."

Question 1: When converting analog signals to digital code, how does "word-length" affect bit-depth and the range of amplitude captured?
Question 2: What is the various bit-depths that can be used to capture amplitude levels and when would you use a lower or higher bit-depth?
Question 3: In your own words, how would you describe bit-depth to someone metaphorically? For example, your friend is asking you to explain bit-depth but needs to visualize the process to make it less complex.

Example: I like to think of bit depth as "how deep of an ocean/sea of amplitude values can we capture." For example, when you think of the loudest sound that can be captured in a digital audio system, imagine the sound jumping out of the water. When this happens, which is what we need to avoid, we call this "Digital Clipping."

When we exceed sea level, our digital audio systems cannot record these loud amplitude values. That said, it's best therefore that we have a much "deeper" sea in which our audio can swim in. The deeper the ocean, translates to capturing both the quietest sounds and the loudest sounds with better accuracy and fidelity.

Your written assignment should be at least two paragraphs, double spaced, with 12pt font. Please be sure to use APA style formatting for your citations and check for grammatical errors before submitting.

Assignment Type

Reading

In-class and/or outside of class

Outside of class

Formative or Summative

Summative

Assignment

In this assignment, you will be reading excerpts from “Conversations with Women in Music Production: The Interviews” by Kallie Marie. In this book, Marie interviews several prominent women in audio and music production and reveals how they’ve navigated their careers. Marie’s candid interview highlights viewpoints on topics such as diversity, childcare, healthcare, pay equity, and the ways technological change is reshaping the industry landscape. As part of your reading assignments, I would like you to choose one interview to discuss in class. As part of this open forum discussion, you will be placed into small groups to compare viewpoints by your peers.

Assignment Type

Other

In-class and/or outside of class

In-class

Formative or Summative

Summative

Assignment

For each lesson, we will have a in-class discussion that is pertinent to our course learning objectives that discusses diversity and inclusion in sound recording. Topics range from opinions on current trends in audio technology to assessments of videos.

For example, when working with artists from diverse backgrounds, how can sound engineers observe and respect cultural customs and traits while also preserving an authentic, unbiased recording.

To complete this assignment, you must be present on the day of the discussion and be ready and able to give your response and to respond to two other fellow students' posts to achieve maximum points. As well, responding to peers helps create a dialogue that supports learning and encourages open thinking. While this discussion will take place in class, it is beneficial to consider some of the guidelines that follow the "Netiquette Protocol" as outlined by our college.

1. Please be respectful and courteous to each other. It is vital to retain a sense of professionalism to ensure a dialogue that focuses on student success.

2. Listen like a partner and not like a critique. Be respectful and offer great feedback to your peers. As continuous learners, we must support each other's educational journey and success! When we do this, we build a community based on mutual goal-driven beliefs that help to make our quest for knowledge meaningful and productive

Course Materials

Textbooks

Sauls, S., & Stark, C. (2022) Audio Production Worktext: Concepts, Techniques, and Equipment. (10th edition). Routledge. ISBN-13: 978-0367640361

Class Size Information

Class Size

30

Class Size Category

F - Individualized, skills#based instruction/field practice 30

Diversity and Inclusion

Explain how diversity and inclusion(e.g., gender, culture/race, sexuality, etc.) is infused into the course.

Several key teaching strategies are used to infuse diversity and inclusion to course learning outcomes. First, students will read articles, watch movies, and discuss the practice of sound recording techniques of other cultures to gain a global perspective of practices that are not solely based on Western ideologies. Second, using a “proactive design approach”, the course is infused with learning outcomes that address diversity through practice. Diversity through practice refers to building equity minded instruction that considers how students communicate amongst each other. As instructors, we have the duty as guides to help students interact with each with positivity and respect to diversity. Maintaining a consistent degree of intelligent design, therefore, limits exclusionary practice, and promotes communication and trust between students and the instructor.

Describe how assignments, instruction, evaluation, course content, and interactions are contextualized for diverse learners promoting an equitable course.

The instructor will maintain and nurture a learning climate that reinforces differentiation that meets the needs of diverse learners when working in face-to-face recording studio environments. This learning climate, based on well-crafted content differentiation, creates a two-dimensional framework for inclusion for both the teacher and learners involved. To achieve this framework, the instructor can allow students to retake equipment exams and scaffold work through a formative and summative design. This enables new and previous information to synthesize together, reinforcing student self-confidence and success.

Interactions

Explain how the course will incorporate student-to-student interaction.

Discussion posts for each lesson are used to addressed topics pertinent to our course learning objectives. Topics range from opinions on current trends in audio technology to assessments of videos that describe technical information that will build a narrative for class discussion. Students create a dialogue that supports learning and encourages open thinking. Students are encouraged to "Listen like a partner and not like a critique." When they do this, a community based on mutual goal-driven beliefs helps to make our quest for knowledge meaningful and productive.

Explain how the course will incorporate instructor-to-student interaction.

To overcome barriers based on gender, culture/race, and sexuality, it is imperative that the instructor give effective feedback that considers the giver, receiver, and environment in a holistic, non-biased manner. The importance of constructive teacher-to-student interactions helps to create feedback that is bidirectional which values diversity and inclusion-based outcomes. As an example, when justifying grades given to students on a creatively subjective assignment (such as a final mix or a creative listening project), it is vital that the instructor provide instructions for students to improve. To achieve this, the instructor can deploy the SKS (stop/keep/start) model of providing feedback. The SKS model is a simple and effective model that asks questions such as: What should I stop doing? What should I keep doing? What should I start doing? SKS can help students self-assess if they are in a behavioral rut and improve on strengths versus weaknesses. As well, SKS can help students self-reflect on what seems scary, and how to mitigate fears through constructive, non-biased feedback.

Explain how the course will incorporate student-to-content interaction.

In addition to the hands-on studio recording sessions done throughout class, students will also be able to reference the concepts through accessible and ADA compliant materials such as recorded and written lecture materials, illustrative images, video, or audio lectures, embedded or linked multimedia content (such as films, YouTube videos, podcasts, etc.), and student created or curated content. For example, after demonstrating their understanding of the content in class, students can further explore concepts on signal flow process when preparing to record instruments, vocals, and other related components to a session through these additional resources.

Explain how the course will incorporate student-to-self interaction (metacognitive).

Using concepts based on Bloom's Taxonomy on Metacognitive Knowledge, course content is infused with techniques and methods for students to develop autonomous thinking and self-interaction/reflection of their own projects and their development of a critically trained ear. Factual, conceptual, and procedural dimensions of metacognitive process are introduced through discussions, projects, and assignments that introduce various levels of abstract thought in sound recording. The course incorporates cognitive dimension skills to help students remember, understand, apply, analyze, evaluate, and create within the field of sound recording. In the cognitive dimension, it is espoused that learners begin with recalling information then move to the understanding of information.

Key: 308