



AUD-140: INTRODUCTION TO AUDIO RECORDING

Effective Term

Fall 2024

BOT Approval Date

03/09/2023

Discipline

AUD - Audio Production

Course Number

140

Course Title

Introduction to Audio Recording

Short Title

Intro to Audio Recording

Credit Status (CB 04)

D - Credit - Degree applicable

Units**Lecture Units**

3.00

Total Units

3.00

Hours**Lecture Contact Hours**

48-54

Out of Class Hours Lecture

96-108

Total Contact Hours

48 - 54

Total Out of Class Hours

96 - 108

Total Student Learning Hours

144 - 162

Distance Education

Yes

Distance Education**Distance Education Type**

Both Fully Online and Hybrid Online

Fully Online Delivery Requirements:

- a. Students must be notified via the college schedule of classes and the syllabus for the class if proctored tests are required for this course
- b. Any planned face-to-face meetings, such as an orientation or study session, must be optional

c. The MSJC curriculum committee requires the use of accessible, asynchronous discussion as a component of every fully online course

Are you using publisher content?

No

Regular Substantive Interaction

Instructor-to-student, student-to-student, and student-to-content contact shall be distributed in a manner that will ensure regular substantive interaction (RSI) is maintained not only weekly but also for the duration of the course. Instructor interactions should be equivalent in time, quality and consistency to the engagement students would receive in a face-to-face course—for example, through announcements, discussion participation, personalized feedback, video messages, or other instructional communications. Instructors are expected to be responsive to student inquiries within a 24-72 hour time frame excluding holidays. RSI will be maintained through a variety of methods:

- Orientation - Students must be oriented to the online and face-to-face portions at the start of the course.
- Announcements - Announcements using the course management system must be posted at least weekly to keep students current on course events, due dates, materials, etc.
- Discussion Forums - Content-related discussion forums within the designated CMS will include appropriate instructor participation and will be initiated and maintained, with timely feedback provided. Instructors are required to monitor the discussions and related activities to provide guidance and direction. Open-ended discussion boards may be used to further learning and interaction.
- MSJC Communication – Instructor will use MSJC-administered communication tools (such as email or the designated CMS communication tools) to regularly communicate with and provide ease of access to students.
- Timely Feedback - Timely feedback on student work will be provided by the instructor, which may include comments and/or rubrics, within the Grades area of the designated CMS.
- Scheduled Meetings – Hybrid and synchronous courses will meet at regularly scheduled times.

ADA Compliance - All course interactions and content must be designed with accessibility in mind and meet ADA requirements.

Catalog Description

This course offers instruction in basic concepts in sound recording and audio technology. Instruction includes a brief history of audio, audio fundamentals, basic acoustics, digital audio workstations, microphones, monitors, signal processors, and beginning recording techniques.

Codes

TOP Code (CB 03)

1005.00* - *Commercial Music

CIP Code

10.0203 - Recording Arts Technology/Technician.

Repeatability Code

No

Grading Option

Letter grade OR P/NP

Learning Objectives

Learning Objectives

Learning Objective

1. Analyze the basic structures of sound waves and acoustic properties.
2. Evaluate the basic concepts of analog to digital conversion.
3. Distinguish the basic components if of computers and digital audio workstations.
4. Differentiate the major types of microphones.
5. Categorize standard audio connectors and differentiate their common uses.
6. Compare and contrast the basic types of monitors.
7. Understand historical developments in sound recording that considers how non-Western cultures approach sound recording.

Learning Outcome Information

Course Learning Outcomes

Learning Outcome
1. Students will analyze the two main types of microphones.
2. Students will evaluate the minimal signal path of studio recording mixing boards.
3. Students will understand the differences between the two transducers used in a recording studio.

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 Lecture Content

1. Brief History of Sound
 - a. Mechanical Era 1857-1925
 - b. Electro/Magnetic Era 1925-1980
 - c. Digital Era 1980-current
2. Global Perspectives in Audio
 - a. Non-Western approaches to sound recording
 - i. Race Dynamics in South African Recording Studios
 - ii. Cultural Differences in Sound
 1. Emotional Interpretation & Tendencies Middle Eastern Scales
 - b. Accessibility in Audio
 - i. Auditory Perception and Accessibility
3. Audio Fundamentals
 - a. Crests & Troughs
 - b. Frequency
 - c. Amplitude (SPL)
 - d. Range of Human Hearing
 - e. Direct sound/Indirect sound

- f. White Noise/Pink Noise
 - g. Fletcher/Munson Curve
- 4. Digital Audio Technology
 - a. Digital
 - b. ADDA
 - c. Sampling
 - d. Bit Depth
 - e. CD Quality
 - f. DVD Quality
 - g. Blu-Ray Quality
- 5. Computers/Audio Interfaces/DAWS
 - a. Computing Platforms
 - b. Audio Interfaces
 - c. DAW Software
- 6. Microphones
 - a. Cardioid
 - b. Omnidirectional
 - c. Dynamic
 - d. Condenser
 - e. Proximity Effect
 - f. Phase Cancellation
 - g. Inverse Square Law
- 7. Monitors
 - a. Dipoles
 - b. Sealed Boxes
 - c. Vented Boxes
 - d. Combination Boxes
 - e. Monitor/Speaker Components
- 8. Signal Processors
 - a. Equalizers
 - b. Dynamic Processors
 - c. Delay
 - d. Reverb
- 9. Connecting the System
 - a. Cables: High and Low Impedance
 - b. TRS
 - c. XLR
 - d. Balanced vs Unbalanced
 - e. Direct Box
 - f. Interference Problems
 - g. Ground Loop
 - h. Magnetic Induction
 - i. Distortion/Clipping
 - j. Run Away Oscillation

Methods of Instruction

Method

Observation and Demonstration

Integration

All lectures will be backed by demonstrations and class exams/projects used to discriminate topics discussed in the following areas: microphone types, monitor applications, digital audio technology, and historical elements related to the history of recorded sound.

DE Adaptations for MOI

All lectures will be online and delivered as accessible videos/tutorials through the CMS that show demonstrations in the following areas: microphone types, monitor applications, digital audio technology, and historical elements related to the history of recorded sound.

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.

DE Adaptations for MOI

Students will participate in weekly discussions topics online 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. Students will respond to each other via the CMS to create a dialogue that supports learning and encourages open thinking.

Method

Visiting Lecturers

Integration

Industry specialists and guest lectures will be invited to demonstrate a variety of cultural instruments and their role in folk-derived music around the world.

DE Adaptations for MOI

Industry specialists and guest lectures will be invited via accessible video conferencing software to demonstrate a variety of cultural instruments and their role in folk-derived music around the world.

Methods of Evaluation**Method**

Quizzes

Integration

Periodic short quizzes will be used to measure a student's comprehension of facts and concepts such as the 5 Points of Audio, microphone-type identification, and mixdown procedures.

DE Adaptations for MOE

Periodic short quizzes will be taken online via the CMS to measure a student's comprehension of facts and concepts such as the 5 Points of Audio, microphone-type identification, and mixdown procedures. Students will receive an auto-graded score upon completion of the quiz.

Method

Exams/Tests

Integration

Test and exams will encompass concepts and factual materials 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.

DE Adaptations for MOE

Test and exams will be available via the CMS online and encompass concepts and factual materials 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. Test scores and feedback will be provided within a week of submission.

Method

Research Projects

Integration

For this project, students will select and list the main components of a Pro Tools-based home recording studio (DAW) of their choice. Students are required to provide a one-page summary of what they plan to accomplish with their DAW and will be evaluated based on their proper use of terminologies and proposed creative application of the software.

DE Adaptations for MOE

For this project, students will select and list the main components of a Pro Tools-based home recording studio (DAW) of their choice and submit their work via the CMS. Students are required to provide a one-page summary of what they plan to accomplish with their DAW and will be evaluated based on their proper use of terminologies and proposed creative application of the software. Feedback and grades will be based on a rubric and given within a week of submission through the Assignment page of the CMS.

Assignments

Assignment Type

Other

In-class and/or outside of class

In-class

Formative or Summative

Summative

Assignment

For each lesson, you will have a discussion topic 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 considering the practice of sound recording in non-Western cultures, what elements of traditional practices are retained to reflect regional authenticity? Additionally, how sensitive/aware should the sound engineer be to specific sound practices that are considered sacred?

To complete this assignment, you must be present in class the day of the discussion and engage with your other fellow students to achieve maximum points. As well, responding to peers helps create a dialogue that supports learning and encourages open thinking. While this discussion will happen in class, the guidelines provided in the colleges "Netiquette Protocol" are valid considerations for in-person discussion:

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. Please refrain from using profanity.
3. 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.

Your score will be based on the quality of your concepts and your engagement with at least two of your peers.

How assignment will be adapted in online format

For each lesson, you will have a discussion topic to complete online 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 considering the practice of sound recording in non-Western cultures, what elements of traditional practices are retained to reflect regional authenticity? Additionally, how sensitive/aware should the sound engineer be to specific sound practices that are considered sacred? To complete this assignment, you must post your response within the discussion board located

on the CMS and 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. Here are some guidelines for this forum that follows the "Netiquette Protocol" as outlined by our college:

1. Please be respectful and courteous to each other as if this was a face-to-face class. It is vital to retain a sense of professionalism to ensure a dialogue that focuses on student success.
2. Please refrain from using profanity, posting lewd images or videos, or any other material that is not considered professional and is deemed offensive. Think of this discussion space as a physical classroom or studio facility. Our interactions in cyberspace should be no different than how we communicate with each other in professional settings.
3. 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

Your score will be based on the quality of your concepts and your engagement with at least two of your peers as stated in the provided rubric within the CMS within a week of your response.

Assignment Type

Writing

In-class and/or outside of class

Outside of class

Formative or Summative

Formative

Assignment

For this assignment, you will research, select, and list the main ten components of a Pro Tools-based home recording studio (DAW) of your choice. Each part is worth 5 points, and the overall total score for this assignment will be 50 points.

"Imagine" that you are going to purchase your home studio, a Pro Tools-based Digital Audio Workstation. Research your purchase options for each of the ten components of a DAW that we will discuss in class. Look up prices and opportunities for all of the different items that fulfill each of the ten components. Decide what things would work best for you (for each element), and then list your choices in list format, numbered 1-10 (in the same order as the class handout).

Include the name and essential details about the items of your choice, the price of each, and where you found the item at that price.

You are also required to provide a one-paragraph summary of what you plan on accomplishing with your DAW. What is your goal?

What do you plan on doing with your DAW?

You must include a paragraph of goals because your goals will determine the types of components that you purchase.

You must research and acknowledge all ten components in this assignment, and provide feedback for each of them, whether you are purchasing an item to fulfill that component or not. (Everyone should turn in a list numbered 1-10.) If you do not need one of the components, you must list it anyway and explain (in writing) why you do not need to purchase it. Don't forget to include the name of the item you have chosen for each component, a few details about the item, the price, and where you found it at that price.

Note, that there are many "package" deals out there. You might purchase a MIDI keyboard that has an onboard audio interface. Make sure you acknowledge the product in all component categories that it satisfies, but only list the item's price once.

You may submit a PowerPoint or word document to complete this assignment; however, a PowerPoint project is preferred. Your instructor will provide examples of PowerPoints to use as a template to assist you within building your studio.

How assignment will be adapted in online format

For this online assignment, you will research, select, and list the main ten components of a Pro Tools-based home recording studio (DAW) of your choice. Each part is worth 5 points, and the overall total score for this assignment will be 50 points.

"Imagine" that you are going to purchase your home studio, a Pro Tools-based Digital Audio Workstation. Research your purchase options for each of the ten components of a DAW that we will discuss in class. Look up prices and opportunities for all of the different items that fulfill each of the ten components. Decide what things would work best for you (for each element), and then list your choices in list format, numbered 1-10 (in the same order as the class handout).

Include the name and essential details about the items of your choice, the price of each, and where you found the item at that price.

You are also required to provide a one-paragraph summary of what you plan on accomplishing with your DAW. What is your goal?

What do you plan on doing with your DAW?

You must include a paragraph of goals because your goals will determine the types of components that you purchase.

You must research and acknowledge all ten components in this assignment, and provide feedback for each of them, whether you are purchasing an item to fulfill that component or not. (Everyone should turn in a list numbered 1-10.) If you do not need one of the components, you must list it anyway and explain (in writing) why you do not need to purchase it. Don't forget to include the name of the item you have chosen for each component, a few details about the item, the price, and where you found it at that price.



Note, that there are many "package" deals out there. You might purchase a MIDI keyboard that has an onboard audio interface. Make sure you acknowledge the product in all component categories that it satisfies, but only list the item's price once.

You may submit a PowerPoint or word document to complete this assignment; however, a PowerPoint project is preferred. Your instructor will provide examples of PowerPoints to use as a template to assist you within building your studio. The guidelines for this project will be provided via the CMS.

Assignment Type

Reading

In-class and/or outside of class

In-class

Formative or Summative

Formative

Assignment

Exploring Sound Recording: Non-Western Practices and Power Dynamics.

There are more genres of recorded music in the world, past and present, than can possibly be discussed in a single course. Part of the course goals is to introduce you to non-Western approaches to sound recording. From this introduction, you will develop critical listening skills, and understand the cultural, technological, political, geographic, and financial systems that shape sound recording in a non-Western context. As you read the assigned material, consider how sound recording is related to issues of power, and how certain dynamics play out amongst artists and recording engineers. The readings should contribute to constructive arguments that invite a dialogue on diversity and inclusion are viewed from a global perspective.

Example reading:

Read/Listen Before Class: Interview with Record Label Owner Kate Ellwanger, "Popular Music in South Africa" in the Rough Guide to World Music, p. 353-370

How assignment will be adapted in online format

Exploring Sound Recording: Non-Western Practices and Power Dynamics

For this online reading assignment, we will focus on music recorded from global perspectives. The goal, is to introduce you to non-Western approaches to sound recording. From this introduction, you will develop critical listening skills, and understand the cultural, technological, political, geographic, and financial systems that shape sound recording in a non-Western context. As you read the assigned material, consider how sound recording is related to issues of power, and how certain dynamics play out amongst artists and recording engineers. The readings should contribute to constructive arguments that invite a dialogue on diversity and inclusion are viewed from a global perspective.

Example reading:

Read/Listen Before Class: Interview with Record Label Owner Kate Ellwanger, "Popular Music in South Africa" in the Rough Guide to World Music, p. 353-370

Course Materials**Textbooks**

Saul, 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, SMI (Student Microaggression Inventory) is used to keep track of environmental indignities that can be explicit or implicit within the field of sound recording. SMI is infused into the course to adjust activities and assignments that could lead to cultural misrepresentations. SMI helps to avoid assignments that implicitly penalize students from diverse socioeconomic backgrounds and to avoid making assumptions that students have equitable access to technology and other resources. 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 (see 2.a and 2.b in COR as well as MOI and the reading assignment)

Second, universal design is used to best serve students who have a disability, are struggling with gender identity, or have socio-economic hardships. Using a "proactive design approach" the course is infused with learning outcomes that address diversity through educational software, instruction, and student services. Promoting a high level of universal design creates consistency and allows for inclusiveness. Maintaining a consistent degree of intelligent design limits exclusionary practice and promotes an island of confidence for student success.

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

Content differentiation is used to contextualize how diversity and inclusion are infused in course assignments, instruction, evaluation, course content, and interactions. For example, content differentiation is employed to avoid assignments that are one-dimensional. Multiple modalities are used to capture or reinforce learning outcomes in sound recording. Process differentiation is used for visual, auditory, verbal, and kinesthetic modalities to convey information to learners. Product differentiation is used to express and create work that demonstrates learning outcomes from diverse backgrounds.

The instructor will maintain and nurture a learning climate that reinforces differentiation that meets the needs of diverse learners within the field of sound recording. 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 rewrite papers and scaffold work through a formative and summative design. This enables new and previous information to synthesize together, reinforcing scaffolding to develop self-reliance necessary to maintain LTC environments.

Interactions

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

The course will incorporate student-to-student interaction by promoting activities that build upon the concept of creating a learning community through diversity and inclusion. Be it face-to-face or online, the course applies strategies from the "Zone of Proximal Development." This strategy exposes students to concepts and ideas above their current level of development by challenging assumptions of cultural, ethnic, gender and sex identity groups in the field of sound recording (for example 2.ii.i in the COR). By engaging students to ask their peers questions about how they perceive unfamiliar concepts in sound recording, there is an opportunity for more in-depth learning through "low-stakes" outcomes that are formative in design.

Discussion posts for each lesson are used to address 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.

Using various methodologies, the instructor will match teaching methods with learning outcomes to offer tools to help students meet today's college classroom dynamism and diversity. The instructor will encourage students to align their views with equity minded responses that reflect the world views of others. The goal is to create a space where dialogue and discourse amongst peers is followed with instructor interaction that invokes synergy between motivation and active learning.

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, 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.

To learn sound recording skills and technical concepts, students will reference accessible and ADA compliant materials such as recorded and written lecture materials, illustrative images, accessible video or audio lectures, embedded or linked multimedia content (such as films, YouTube videos, podcasts, etc.), and student created or curated content.

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. 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.

Course activities introduce students to various self-awareness levels by developing a holistic approach that promotes emotional intelligence. Formative, low-stakes assessments, have the added advantage of being part of a summative evaluation that encourages students to reflect on how they could use active learning for deeper thinking at a meta-cognitive level for quizzes and exams. Students can engage in active learning while subconsciously developing at the meta-level based on the temporality of motivation through active participation.

Key: 307