



## MUSI 3243 – Music Technology

### Fall 2025 Syllabus

**Instructor of Record:** Dr. Sarah Roberts, D.M.A.

**Teaching Assistant:** Jason Zedlitz

#### Office Hours:

- Dr. Roberts: By appointment (FAC 2216)
- Jason Zedlitz: Mon–Fri, 1:00–4:00 PM (FAC 2212)
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### Course Overview

This course provides a hands-on introduction to music technology, emphasizing **Digital Audio Workstations (DAWs)** and core concepts such as **signal flow, microphone techniques, audio processing, acoustics, and live sound**. Students will build practical skills applicable to both **studio and live sound** environments.

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### Student Learning Outcomes

1. **Develop Comprehensive Skills in Music Technology:**
  - Identify and arrange audio signal flows.
  - Master audio path through various audio setup components.
  - Troubleshoot common audio issues.
  - Proficient in microphone selection and positioning.
  - Use audio processing tools for sound enhancement and balance.
  - Understand acoustic principles for optimal sound.
  - Gain proficiency in using DAWs for recording, editing, and mixing.
2. **Understand Audio Signal Flow:**
  - Identify principles of audio signal flow from source to output.
  - Troubleshoot common audio signal issues.



3. **Master Microphone Techniques:**
    - Examine different types of microphones and their applications.
    - Develop skills in microphone selection and positioning.
  4. **Apply Audio Processing Fundamentals:**
    - Gain practical experience with EQs, compressors, and limiters.
    - Enhance and manipulate sound for clarity and balance.
  5. **Understand Acoustic Principles:**
    - Explore room treatment, soundproofing, and speaker placement.
  6. **Develop Live Sound Engineering Skills:**
    - Set up and operate live sound equipment.
    - Manage live sound signals and address challenges during performances.
  7. **Utilize Digital Audio Workstations:**
    - Navigate and use DAWs for recording, editing, mixing, and producing music.
    - Integrate DAWs with traditional audio equipment and techniques.
    - Apply DAW-specific tools and plugins for audio processing and enhancement.
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#### **Grading Breakdown (Total: 215 Points)**

<b>Assignment</b>	<b>Description</b>	<b>Weight</b>
<b>Assignment 1</b> (Week 2)	Audio Signal Flow (Canvas Discussion)	10 pts
<b>Quiz 1</b>	Audio Signal Chain	25 pts
<b>Assignment 2</b> (Week 3)	Microphone Techniques (Canvas Discussion)	10 pts
<b>Quiz 2</b>	Microphone Techniques	25 pts



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Assignment	Description	Weight
<b>Assignment 3</b> (Week 5)	Acoustic Room Comparison (Audio + Reflection)	20 pts
<b>Quiz 3</b>	Acoustic Principles	25 pts
<b>Assignment 4</b> (Weeks 10–11)	Original DAW Project (Min. 4 tracks)	30 pts
<b>Assignment 5</b> (Week 12)	Project Reflection & Peer Feedback (Canvas Discussion)	20 pts
<b>Final Exam</b> (Week of 12/9/24)	Individual Multitrack Mix Submission	50 pts

**Total Possible Points:** 215

**Grading Scale:**

- A = 193–215
- B = 172–192
- C = 150–171
- D = 129–149
- F = Below 129

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## Policies

**Late Work:** -10 pts per day

**Make-Up Exams:** Valid excuse required within 1 week

**Attendance:** >1 unexcused absence = -10 pts per absence

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### **Tips for Success in this Course**

- 1. Participate.** I invite you to engage deeply, ask questions, and talk about the course content with your classmates. You can learn a great deal from discussing ideas and perspectives with your peers and professor. Participation can also help you articulate your thoughts and develop critical thinking skills.
  - 2. Manage your time.** I get it—students usually juggle a lot, and I know you've got commitments beyond this class. Still, doing your best often means carving out enough dedicated time for coursework. Try scheduling specific blocks of time and ensure you have enough room to finish assignments, allowing extra space for any tech issues that might pop up.
  - 3. Login regularly.** I recommend that you log in to Canvas several times a week to view announcements, discussion posts and replies to your posts.
  - 4. Do not fall behind.** This class moves at a quick pace and each week builds on the previous class content. If you feel you are starting to fall behind, check in with the instructor as soon as possible so we can troubleshoot together. It will be hard to keep up with the course content if you fall behind in the pre-work or post-work.
  - 5. Use Canvas notification settings.** Pro tip! Canvas can ensure you receive timely notifications in your email or via text. Be sure to enable notifications to be sent instantly or daily. (Canvas Notification Guide)
  - 6. Ask for help if needed.** If you are struggling with a course concept, reach out to me and your classmates for support.
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## **Week 1 – Introduction to Music Technology**

**Topic:** Syllabus Overview & Course Introduction

**Materials:** Course Syllabus, Instructor Overview, Canvas Walkthrough

**Activities:**

- Syllabus review and discussion of expectations
- Overview of course objectives and grading
- Intro to Canvas, DAWs, and classroom tools

**Assignment(s):** None

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## **Week 2 – Audio Signal Flow Basics**

**Topic:** Understanding Audio Signal Chains

**Materials:** “Audio Signal Flow” PDF, Signal Chain Diagrams

**Activities:**

- Lecture on signal flow from source to output
  - Demonstrations of physical and virtual signal chains
  - Group discussion on perception of signal routing
- Assignment 1:**
- Group discussion on how signal flow changes the way sound is perceived (Canvas)

- *Weight: 10 Points*

**Quiz 1:** Audio Signal Chain – *Weight: 25 Points*

**Total Weight This Week:** 35 Points

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### **Week 3 – Microphone Techniques**

**Topic:** Microphone Types & Applications

**Materials:** “Microphone Techniques” PDF, Group Audio Files

**Activities:**

- Explore dynamic, condenser, ribbon microphones
- In-class microphone demos for isolation vs. live environments
- Listen to recordings from different mic types

**Assignment 2:**

- Group discussion on mic types, applications, and suitability for studio/live use (Canvas)
- *Weight: 10 Points*

**Quiz 2: Microphone Techniques – Weight: 25 Points**

**Total Weight This Week: 35 Points**

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### **Week 4 – Audio Processing Fundamentals**

**Topic:** Using EQs, Compressors, and Limiters

**Materials:** “Audio Processing Fundamentals” PDF

**Activities:**

- Lecture on processing tools
- Hands-on EQ & compression demonstrations
- Peer analysis of sound-shaping approaches

**Quiz 3: Audio Processing Fundamentals – Weight: 25 Points**

**Assignment(s): None**

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## **Week 5 – Acoustic Principles**

**Topic:** Sound Behavior in Different Spaces

**Materials:** “Understanding Acoustic Principles” PDF

**Activities:**

- Explore reverberation, room modes, and treatment
- Compare acoustic spaces on campus

**Assignment 3:**

- Record in two different acoustic environments, post recordings, reflect on differences
  - Respond to one classmate with feedback
  - *Weight: 20 Points*
- Assignment(s):** None additional
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## **Week 6 – Live Sound Engineering**

**Topic:** Setting Up & Managing Live Sound

**Materials:** “Live Sound Engineering”

**Activities:**

- In-class demo of PA setup, monitors, feedback suppression
- Simulate troubleshooting common stage issues

**Quiz:** Live Sound Engineering – *Weight: 25 Points*

**Assignment(s):** None

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## **Week 7 – DAW Introduction: Logic Pro**

**Topic:** Getting Started with DAWs

**Materials:** “Logic Pro Introduction”

**Activities:**



- Walkthrough of Logic Pro interface
  - Audio file imports, routing, and simple edits
- Quiz: Logic Pro Introduction – *Weight: 25 Points*  
Assignment(s): None
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#### **Week 8 – Recording & Editing in a DAW**

**Topic:** Multi-Track Recording and Basic Edits

**Materials:** “Logic Pro Basic Editing and Recording”

**Activities:**

- Record and edit short session in Logic Pro
  - Practice cutting, trimming, and snapping audio
- Assignment(s): None
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#### **Week 9 – Mixing & Producing in a DAW**

**Topic:** Layering, Panning, and Leveling

**Materials:** Continued use of Logic Pro content

**Activities:**

- Mix 4–5 tracks using volume automation, basic EQ, panning
  - Peer comparison of mixes in class
- Assignment(s): None
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#### **Week 10 – Mixing Techniques Part 1**

**Topic:** Applying Advanced Mixing Techniques

**Materials:** “Mixing Techniques – Part 1”

**Activities:**

- Apply bus routing, subgroup processing
  - Start project planning and track layout
- Assignment 4 Begins:





- Record/edit a project in Logic Pro using a minimum of 4 tracks
  - Must include audio processing and basic mixing
  - *Weight: 30 Points (due Week 11)*
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### **Week 11 – Mixing Techniques Part 2**

**Topic:** Refining the Project Mix

**Materials:** “Mixing Techniques – Part 2”

**Activities:**

- Fine-tune your mix: balance, effects, and final EQ
  - Instructor check-ins and one-on-one feedback  
Continue Assignment 4
  - Project due by end of week
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### **Week 12 – Mastering + Project Reviews**

**Topic:** Mastering and Peer Review

**Materials:** Class recordings and mastering references

**Activities:**

- Finalize your mix with limiting and master bus processing
  - Share project in Canvas; give peer feedback  
Assignment 5:
  - Participate in a Canvas forum, post project, respond to 2 classmates with positive critique
  - *Weight: 20 Points*
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## **Finals Week – Final Exam**

**Topic:** Comprehensive Mixdown

**Materials:** Student-recorded tracks

**Activities:**

- **Final exam project:** Each student submits a personal multitrack mix
- **Incorporate principles learned throughout semester**  
**Final Exam Submission Due: 12/9/24**
- ***Weight: 50 Points***

**Total Possible Points: 215**

**Grading Scale:**

- **A = 193–215**
- **B = 172–192**
- **C = 150–171**
- **D = 129–149**
- **F = Below 129**

## **Policies**

**Late Work:** -10 pts per day

**Make-Up Exams:** Valid excuse required within 1 week

**Attendance:** >1 unexcused absence = -10 pts per absence

## **University Policies & Resources**

Refer to the “Syllabus” section in Canvas for:

- Academic Integrity
- Disability Services
- Student Counseling
- Technology Support



Calendar of Topics, Readings, and Due Dates Note the last date to drop the course is included in the calendar along with the final exam date and time. These are required.

- Week 1: Introduction to Music Technology
- Week 2: Audio Signal Flow Basics
- Week 3: Microphone Techniques
- Week 4: Audio Processing Fundamentals
- Week 5: Acoustic Principles
- Week 6: Live Sound Engineering
- Week 7: Introduction to DAWs • Week 8: DAWs: Recording and Editing
- Week 9: DAWs: Mixing and Producing
- Week 10: Integrating DAWs with Traditional Equipment
- Week 11: Project Work • Week 12: Review and Project Presentations
- Final Exam: 12/9/24

deadlines. In the unlikely event of a prolonged university closing, or an extended absence from the university, adjustments to the course schedule, deadlines, and assignments will be made based on the duration of the closing and the specific dates missed.