Recording Technology 1 — MMP235

Master Syllabus

Fall 2026

INSTRUCTOR INFORMATION

Instructor: Christoph Thompson

Office: MI212

Office Hours: Thursday 2pm and by zoom appointment

Email: cnthompson4@bsu.edu

Contact information for your specific section instructor will be provided at the start of the semester and posted in Canvas.

COURSE MEETING INFORMATION

Room: MI216/MI223 Lab

Meeting Times:

- Section 1: Tuesday/Thursday, 9:30–10:45 AM — MI216/MI223 Lab
- Section 2: Tuesday/Thursday, 11:00 AM–12:15 PM — MI216/MI223 Lab
- Section 3: Tuesday/Thursday, 12:30–1:45 PM — MI216/MI223 Lab
- Section 4: Monday/Wednesday, 10:00–11:15 AM — MI216/MI223 Lab

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COURSE INFORMATION

Course Description: MMP235 Recording Technology 1: An introduction to the basics of recording technology. Topics include analog and digital recording systems, microphone design, microphone placement, and basic mixing techniques.

Prerequisites: MMP125

Course Outcomes

Students will be able to:

- Demonstrate thorough knowledge of signal flow in a modern studio environment
- Perform basic recording and editing operations in Pro Tools software
- Demonstrate an understanding of basic microphone theory and techniques
- Apply dynamic effects to shape, compress, limit, or clean up an audio signal
- Demonstrate understanding of basic equalizer function, purpose, and application
- Understand basic digital audio processing and digital audio theory

Course Modality / Structure

The course is divided into five modules, each focusing on a major topic of recording technology. At the end of each module, students will hand in a practical recording project and take a quiz on the respective material. This course is praxis-focused.

Students who do not pass practical exams will not pass the course. Hearing, technical proficiency, and skill are as important as written excellence.

Course Time Commitment

It is expected that students will spend approximately 2 hours of study time outside of class for every one hour in class. Since this is a 3-unit class, students should expect to study an average of 6 hours outside of class each week.

COURSE MATERIALS

There is no required text, but the instructor strongly recommends owning the following books as references:

- Williams, Michael. *Microphone Arrays for Stereo and Multichannel Sound Recording.*
- Eargle, John. *The Microphone Book.*
- Dickreiter, Michael. *Tonmeister Technology.*
- Streicher and Everest. *The New Stereo Sound Book.*
- Howard and Angus. *Acoustics and Psycho-acoustics.*

It is **strongly recommended** that students purchase an AVID Pro Tools 1-year student subscription.

COURSE ASSIGNMENTS AND ASSESSMENTS

Assignment	Date Due	Module
Project 1	Friday, September 18, 2026	1
Module 1 Quiz	Friday, September 18, 2026	1
Project 2	Week of October 12, 2026	2
Written Midterm	Week of October 12, 2026	2
Midterm Practical Exam	Week of October 19, 2026	2
Compression Homework	Friday, October 23, 2026	3
Project 3	Friday, October 30, 2026	3
Module 3 Quiz	Friday, October 30, 2026	3
EQ Homework	Friday, November 6, 2026	4
Module 4 Quiz	Friday, November 6, 2026	4
Project 4	Friday, November 13, 2026	4
Project 5 (Final Project)	Friday, December 11, 2026	5
Final Exam	December 8–11, 2026 (per BSU Final Exam Matrix)	5

COURSE STATEMENTS AND POLICIES

Attendance Policy

Students are expected to attend all class sessions. Three absences will result in a 10% reduction, four absences in a 20% reduction of final grade percentage.

Students with five or more absences will receive an F for the course. Two tardy entrances will be considered an absence. **This applies to online attendance as well.**

Absence during an in-class exam will only be tolerated under extreme circumstances and will require medical documentation. In this case, the exam must be completed before the next class meeting time.

All excuses for absences, whether medical or otherwise, are at the discretion of the instructor.

Please review the University Attendance Policies here: https://www.bsu.edu/about/administrativeoffices/vice-provost/student-services/attendance-policies

Feedback Policy

- The instructor will respond to email sent from your official Ball State email address within 24 hours on weekdays (Monday–Friday) and within 48 hours on weekends.
- Quizzes, assignments, and discussions will be graded no later than 7 business days after submission.
- Contact your instructor directly with questions or concerns about your performance in class.

Recording Policy

Because copyrighted material is often used for demonstration, recording of a lecture, demonstration, or any other classroom activity requires advance approval from the instructor.

Late Assignment Policy

Positively no late work will be accepted. Exceptions are reserved for exceptional circumstances.

Grading Policy

Appropriate evaluation of academic performance is an integral part of the learning experience. In the absence of mistake, fraud, bad faith, or incompetence, the instructor is the key decision-maker on the assignment of grades. For information concerning grade appeals, consult the Ball State Grade Appeals page.

Grade Distribution

Component	Weight	Grade	Range
Module Projects/Quizzes (5 × 10%)	50%	A	95–100%
Written Midterm	15%	A–	92–94%
Midterm Practical	15%	B+	89–91%
Final Exam + Practical	20%	B	85–88%
		B–	82–84%
		C+	79–81%
		C	75–78%
		C–	72–74%

		D+	69–71%
		D	65–68%

UNIVERSITY POLICIES

We are committed to ensuring that all members of the community are welcome, through valuing the various experiences and worldviews represented at Ball State and among those we serve. We promote a culture of respect and civil discourse.

If you need course adaptations or accommodations because of a disability, please contact the instructor of record as soon as possible. Ball State's Disability Services office coordinates services for students with disabilities; documentation of a disability needs to be on file in that office before any accommodations can be provided. Disability Services can be contacted at 765-285-5293 or dsd@bsu.edu.

Disability Services: https://www.bsu.edu/about/administrativeoffices/disability-services

Attendance Policies

https://www.bsu.edu/about/administrativeoffices/vice-provost/student-services/attendance-policies

Ball State Academic Ethics Policy

Honesty, trust, and personal responsibility are fundamental attributes of the university community. Academic dishonesty and other forms of academic misconduct threaten the foundation of an institution dedicated to the pursuit of knowledge and will not be tolerated. To maintain its credibility and reputation, and to equitably assign evaluations of scholastic and creative performance, Ball State University is committed to maintaining a climate that upholds and values the highest standards of academic integrity.

Visit the complete Student Academic Ethics Policy.

Plagiarism Policy

Plagiarism is not acceptable. Unless otherwise indicated, students must work independently on all assignments. Sharing of files is not permitted for any reason.

Potential Violations

Examples of academic integrity violations include but are not limited to:

- Working with another person on any assignment other than authorized group projects
- Sharing or allowing others to access your files, whether done with permission or not
- Use or possession of a file created by someone else
- Reusing work from another semester, course, or section
- Fraudulent submission of work
- Using unauthorized materials during exams
- Impersonating someone else or having them impersonate you
- Making fraudulent or dishonest statements regarding your work
- Soliciting others to complete work for you
- Posting course files and resources on study or content-sharing websites

The Plagiarism Tutorial from UNC Libraries provides a strong foundation in academic integrity.

All work conducted and/or submitted in this course must be your own, completed in accordance with Ball State University's Student Academic Ethics Policy. Students may not collaborate with or make use of ChatGPT or any other generative AI application at any time to develop materials submitted in this course.

Plagiarism Detection

The campus subscribes to SimCheck, a plagiarism prevention service, through Canvas. Students may need to submit written assignments to SimCheck. Student work will be used for plagiarism detection and for no other purpose. A student may indicate in writing to the instructor that they refuse to participate in the plagiarism detection process, in which case the instructor can use other electronic means to verify the originality of their work.

Proctoring

This course may require the use of the Respondus LockDown Browser and Monitor for online exams. Watch this short video for a basic understanding of LockDown Browser and the optional webcam feature (which may be required for some exams). Instructions for obtaining the software can be found in the course.

CANVAS AND STUDENT PRIVACY

Canvas Accessibility

Canvas provides a user experience that is easy, simple, and intuitive. Special attention has been paid to making Canvas screen-readable. The Rich Content Editor encourages users to create accessible content pages (i.e., text formatting is accomplished using styles). Canvas is designed to allow limited customization of colors and schemes to be accessible for all users. The National Federation of the Blind granted Canvas the Gold Level Web Certification in 2010.

Find more information by visiting the Canvas Voluntary Product Accessibility Template (VPAT).

FERPA and Privacy

As a student, your educational records are considered confidential. Under FERPA (Family Educational Rights and Privacy Act), your records are confidential and protected. Under most circumstances, your records will not be released without your written and signed consent. However, some directory information may be released to third parties without your prior consent unless a written request to restrict this is on file.

Learn more by reading Ball State's FERPA and Privacy and Protection policy.

Video Conferencing Recording

In this class, software may be used to record live class discussions. As a student in this class, your participation in live class discussions may be recorded. These recordings typically will be made available only to students enrolled in the class, to assist those who cannot attend the live session or to serve as a resource for those who would like to review content that was presented. Students who prefer to participate via audio only will be allowed to disable their video camera so only audio will be captured. Students who prefer to listen only must disable their audio capability and visual camera. If you have concerns, please discuss these options with your instructor.

ACADEMIC SUPPORT SERVICES

The Writing Center

All writers improve with practice and feedback. Students are encouraged to use the Writing Center (Robert Bell 295, Bracken Library, or online) to get additional feedback on their writing. To schedule a free appointment, go to www.bsu.edu/writingcenter. Online and in-person appointments are available seven days a week; plan ahead, as appointments book quickly.

The Learning Center

The Learning Center offers free tutoring and academic coaching for many courses at Ball State. Students can make appointments for online (Zoom) or in-person (NQ 350) sessions.

To make an appointment, visit my.bsu.edu and click "TutorTrac" in the Additional Tools section, or go directly to https://ballstate.go-redrock.com.

Testing accommodations for students with disabilities are available for students who have received the appropriate documentation from Disability Services. Tests may be administered in the Learning Center.

Supplemental Instruction is available in select courses. For more information, visit bsu.edu/learningcenter or call 765-285-1006. Follow on Instagram: BallStateLC.

COURSE SCHEDULE — FALL 2026

This syllabus and schedule are subject to change in the event of extenuating circumstances. Sessions listed below correspond to each section's two weekly class meetings.

Fall 2026 semester: August 24–December 11, 2026. Final Exam Period: December 8–11, 2026.

Module 0: Review

Module Outcome: Students review foundational concepts of sound and measurement prior to beginning studio work.

Week 1 *(Aug 24–28)*

Session 1: The basics of sound, waveform characteristics; dB / log-antilog

Session 2: Measuring sound (peak/RMS); SPL/SIL/SWL; gain vs. level

Module I: Signal Flow I

Module Outcome: Students can route signals into the studio and from there into Pro Tools and back. Students can set proper gain and levels at the input stage, route signals as directed, and record in Pro Tools.

Week 2 *(Aug 31–Sep 4)*

Session 1: The three domains, dB, connections; the components of a console, overview of the channel strip

Session 2: Gain-staging, levels and impedance, distortion, and pitfalls

Week 3 *(Sep 7–11)*

No Monday/Wednesday class Sep 7 — Labor Day (no classes university-wide).

Session 1: Impedance and distortion; routing into the console, internal routing of a console

Session 2: Recording a monophonic source

Week 4 *(Sep 14–18)*

Session 1: Inline/split/patchbays/conventions; external (outboard) routing, patchbays, conventions

Session 2: Routing within the studio

Module 1 Project (due Fri, Sep 18): Record a monophonic source into Pro Tools through the console. The signal may be any instrument. The signal should not be distorted, should show no excessive noise, and should not be too soft. A clipped signal/digital distortion will result in a low score.

Module II: Microphones

Module Outcome: Students understand the function and difference between the three basic microphone designs. Students are able to differentiate microphones by distinct characteristics, polar patterns, and frequency response. Stereophonic techniques are explored.

Week 5 *(Sep 21–25)*

Session 1: Microphone Design I

Session 2: Experiencing polar patterns

Week 6 *(Sep 28–Oct 2)*

Session 1: Microphone Design II / spatial perception; experiencing proximity and space

Session 2: Stereo arrays in practice

Week 7 *(Oct 5–9)*

Session 1: Stereo I: the basic principles of stereophonic recording

Session 2: Stereo arrays in practice

Week 8 *(Oct 12–16)*

Fall Break Mon–Tue, Oct 12–13 — no classes. Monday/Wednesday section does not meet Oct 12.

Session 1: Stereo II: time and intensity, the concept of the SRA; Blumlein, Mid-Side / Sum+Difference; review

Session 2: Stereo arrays in practice; Written Midterm

Module 2 Project (due during Week 8): Record a single source through the console using three different techniques/approaches/mics (directional variations, polar pattern variations, or different stereo techniques). One recording must be in stereo. Accompany the project with short prose explaining your microphone and technique choices.

Midterm Practical Exam: Week of October 19, 2026.

Module III: Dynamics and the Time Domain

Module Outcome: Students will be able to choose, adjust, and apply dynamic effects including compressor, limiter, expander, and noise gate, and will know their historical significance and underlying principles.

Week 9 *(Oct 19–23)*

Session 1: Ways of measuring and understanding dynamics, loudness

Session 2: Dynamic effects in practice

Compression Homework (due Fri, Oct 23): Applied exercises on gain-reduction metering and compressor settings, assigned ahead of the Module 3 project.

Week 10 *(Oct 26–30)*

Session 1: Digging deeper into compression

Session 2: Dynamic effects in practice

Module 3 Project / Module 3 Quiz (due Fri, Oct 30): Students receive three recordings: one speech recording with ambient noise (use a noise gate to clean it up), one drum loop (use a compressor to even out dynamics and increase loudness), and one dynamically varied recording (use a limiter to prevent clipping).

Module IV: Filters and the Frequency Domain

Module Outcome: Students will be able to choose, adjust, and apply EQ, and will know its historical significance and underlying principles, sensitizing their frequency hearing across different EQ techniques.

Week 11 *(Nov 2–6)*

Session 1: Pass filters and the frequency domain, Fourier primer

Session 2: Filters in practice; EQ in practice

Week 12 *(Nov 9–13)*

Session 1: Filter designs in the analog and digital domain

Session 2: EQ in practice

EQ Homework / Module 4 Quiz (due Fri, Nov 6): Applied EQ exercises covering analog and digital filter design.

Project 4 (due Fri, Nov 13): Students receive three files, each with a specific frequency inequality to correct with an equalizer, taking care to maintain the overall aesthetics of the recording. Students decide whether to boost or reduce frequencies and justify their EQ type/characteristic choice in a short piece of accompanying prose.

Module V: Digital Audio, DAW, and Basic Production

Module Outcome: Students will understand the basic history and function of digital recording technology and underlying processes, be able to edit audio in Pro Tools (trim, cut, copy, paste), explore mainstream digital time-based effects, and understand the purpose and application of audio data compression.

Week 13 *(Nov 16–20)*

Session 1: The digital domain; editing I: zero-crossing and phase

Session 2: Pro Tools–specific shortcuts and tools

Week 14 *(Nov 23–27)*

Thanksgiving Break Wed–Sun, Nov 25–29 — no classes. Tuesday/Thursday section does not meet Nov 26; Monday/Wednesday section does not meet Nov 25.

Session 1: The DAW; editing I: zero-crossing and phase

Session 2: No class — Thanksgiving Break

Week 15 *(Nov 30–Dec 4)*

Session 1: Editing I: Pro Tools–specific shortcuts and tools; comping takes

Session 2: Editing I: comping takes (continued)

Project 5 / Final Project (due Fri, Dec 4): See Canvas for full project details. *This module project counts double, as no quiz is given during this module.*

Monday, December 7 — Last day of full-term classes (review / wrap-up).

December 8–11 — Final Examination Period. See the BSU Final Exam Matrix for your section's scheduled time.