Harper College

1200 West Algonquin Road
Palatine, Illinois 60067-7398

Music Department

College Mission: *Harper College enriches its diverse communities by providing quality, affordable, and accessible education. Harper College, in collaboration with its partners, inspires the transformation of individual lives, the workforce, and society.*

MUS 203 Mixing and Mastering Techniques
Spring 2026 Course Syllabus

General Course Information

Credit Hours: 3

Class Dates: January 12, 2025 – May 15, 2026

Meeting Times: Wednesdays, 3:00–6:15pm

Meeting Location(s): P-109, plus occasional time in the Harper Audio Studio (P-105, P-106, P-107)

Modality: Blended

Online Expectations: Some course content will be delivered via Blackboard, including all lecture slides as well as additional readings, videos, tools, and exam review materials. Furthermore, all assignments will be submitted through Blackboard. These either be completed in your own time and using your own technology or by visiting the Harper Audio Lab (P-109) during open lab hours (posted outside the door for the duration of the semester). Projects will also be completed on your own or at the Harper Audio Lab, but will additionally require the use of professional audio equipment.

Last Day to Drop for 100% Refund: January 21, 2026

Last Day to Withdraw: April 20, 2026

Instructor Information

Name: Carlo Diaz

Prefer to be Addressed As: Carlo

Email: dc34642@harpercollege.edu

Office Hours: email for appointment

Preferred Method of Communication: email

Course Description

Course Description: Students learn proper mixing and mastering techniques in both the digital and analog domains. Priority will be given to a thorough knowledge of digital processing via plugins while

also conducting sessions in an analog studio. Proper spectral, spatial and dynamic mastering techniques will be explored with both digital and analog mastering chains with a focus on metering and loudness for various mediums, intersample peaks, SRC, dithering and creating a DDP image.

Prerequisites: MUS 201 Fundamentals of Au

Course Outcomes: Upon successful completion of the course, students should be able to:

1. Follow proper gain staging throughout a mixing and mastering session
2. Apply their understanding of signal flow in both analog and digital domains
3. Create a balanced mix of a song correcting spectral, dynamic, phase and spatial issues
4. Use proper EQ techniques, both analog and digital
5. Use proper compression and limiting techniques, both analog and digital
6. Explore spatial processors and saturation techniques, both analog and digital
7. Print/commit/bounce audio stems
8. Follow proper archiving and sharing of a DAW session
9. Properly print/bounce mixes that are master-ready
10. Apply processing to correct spatial, dynamic, phase and spatial issues during the mastering process
11. Apply proper dithering and sample rate conversion accommodating various audio formats
12. Create an album layout including track spacing and crossfades for numerous audio formats
13. Create a DDP image including an album info sheet

Course Topic Outline:

1. Review Signal flow and gain staging
    a. Meters and reference levels
    b. dbFS, peak and rms, LUFS
    c. A/D and D/A conversion
    d. Signal flow in a DAW
    e. Outboard processing
    f. Plugins
    g. Serial vs. parallel signal flow
    h. Busses and Subgroups
2. Mixing
    a. Preparing a mixing session/template
    b. Listening and reference tracks
    c. Metering, levels and loudness
    d. Compression in mixing vs mastering
    e. EQ in mixing vs mastering
    f. Spatial processing
    g. Stereo and mid/side processing
    h. Limiting in mixing
    i. Time-based effects

   j. Modulation effects
   k. Bus processing
   l. Mix bus processing
   m. Printing/committing audio stems
   n. Bouncing audio
   o. Properly archiving and sharing mixing session/audio files/deliverables
3. Mastering
   a. Preparing a mastering session
   b. Listening and reference tracks
   c. Metering, levels and loudness
   d. Parameters and styles of compressors
   e. EQs and filter types
   f. Spatial processing
   g. Saturation
   h. Multiband compression
   i. Stereo and mid/side processing
   j. Limiting
   k. Album layout
   l. Track spacing and crossfades
   m. Exporting, dithering and SRC
   n. Quality control (QC)
   o. DDP images, track sheets and deliverables

Required Materials

Textbook:

Reading assignments from assorted textbooks will be provided via Blackboard.

Technology:

- Computer and/or tablet
- Internet Access
- Headphones with ¼ inch adaptor
- Calculator (phone calculator will work)
- Students should have general computer knowledge including web searches, presentation skills, document sharing and file management.

Course Assessments

Assessment Overview

Grading Criteria:

Grading Categories	Points/Percentage
1. Attendance & Participation	40%
2. Projects	60%

Grading Scale:

Final Grade	Points/Percentage
A	90 – 100%
B	80 – 90%
C	70 – 80%
D	60 – 70%
F	59 and lower

Assessment Types:

- **Attendance & Participation:** Attendance in weekly class meetings is essential to your success in this course, and you are expected to participate actively and openly in classroom activities. That said, I understand that unexpected things can prevent you from attending. Therefore, I only ask that you provide me with notice of any absences by email within 24 hours after the start of class at the latest, though ideally before we meet. We will then work together on a plan to get you caught up on missed work. If you are repeatedly absent without notice and/or fail to make up work as agreed, I will need to deduct points from your grade.
- **Projects:** Over the course of the semester, I will assign several projects through Blackboard. Each of these will take 1–3 weeks to complete and will require the use of professional audio software and/or equipment. If you need to use Harper resources, please plan ahead in case of limited availability, scheduling constraints, or unexpected technical difficulties. I am happy to offer guidance on using these resources either during our weekly class meetings or during office hours.
    - **Project 1: Set Up a Mixing Session in Pro Tools**
      Using provided audio files, set up a Pro Tools session for mixing according to recommendations covered in class and readings. Label all channels, organize in a logical manner, mult tracks as appropriate, and create common mix busses. Submit screenshots of your edit and mix windows.
    - **Project 2: Mix a Provided Song in Pro Tools—Analog**
      Using your Pro Tools session from Project 1, mix a song following recommendations covered in class and readings, but using only the analog processing equipment in P-105 (be sure to book your time in the room asap!). When finished, submit screenshots of your edit and mix windows, a final bounced audio file (48kHz/24-bit/WAV), and a one-page statement describing the unique challenges and creative opportunities you encountered and how you addressed them.

- **Project 3: Mix a Provided Song in Pro Tools—Digital**
  Using provided audio files, neatly set up a Pro Tools session and mix the song following recommendations covered in class and readings, but this time using only digital processing tools (i.e. plug-ins). As before, when finished, submit screenshots of your edit and mix windows, a final bounced audio file (48kHz/24-bit/WAV), and a one-page statement describing the unique challenges and creative opportunities you encountered and how you addressed them.
- **Project 4: Mix Your Own Song in Pro Tools—Hybrid**
  Mix another song, this time one of your own (or one of your choice from a provided database). Again, follow practices addressed in class and readings for setting up the session neatly and for mixing both correctively and creatively as appropriate, but this time feel free to use any combination of digital and analog equipment. Again when finished, submit screenshots of your edit and mix windows, a final bounced audio file (48kHz/24-bit/WAV), and a one-page statement describing the unique challenges and creative opportunities you encountered and how you addressed them.
- **Project 5: Set Up a Mastering Session in Wave Lab**
  Using your songs from Projects 2–4 as an EP, set up a Wave Lab session for mastering following recommendations covered in class and readings.
- **Project 6: Master an EP in Wave Lab**
  Using your Wave Lab session from Project 5, perform all appropriate mastering procedures and produce an EP for digital and vinyl release.

Assessment Policies

Late Work Policy: All assignments, projects and tests *must* be completed by requested due date. If a student is unable to complete by assigned date, they must communicate with me and discuss the matter. If work is turned in late, I will use the following grading outline:

- 1 day late – 10% deduction
- 2 days late – 20% deduction
- After 2 days – 30% deduction

Course Surveys (Student Opinionnaires of Instruction): Near the end of this course, you will be invited to participate in a survey. The feedback you provide is valuable to me, as your instructor, as well as Harper College. The comments you share are completely anonymous and the compiled confidential results will not be released until after final grades have been posted for the entire semester. You may access the survey through a link you will receive in your Harper College email account or directly via Blackboard. Surveys are *usually* available three weeks before the last day of class. To check a survey's availability in Blackboard, select the SOI- COURSE SURVEY link in the course menu. Surveys are only visible when they are available. *Note: Course surveys are administered in Fall and Spring semesters only.*

Course Culture

In Our Course

What to Expect from Your Instructor:

- I will be available for office hours either in person, via email and/or web conference.
- Assignments, handouts, practice tests and all other course materials will be available in Blackboard.
- I will return assignments within 2 weeks unless otherwise notified.
- For all assignments and projects, I will provide you with a rubric and specific instructions.
- My main priority is to be easily available to you and to assist you through this course helping you meet your creative and academic goals.

Course Interactions and Participation: I understand that everyone learns differently, so I will not set any formal requirements for you to ask or answer questions during in-class discussions or lectures. However, I will on occasion ask each student to share work from assignments and/or projects with the class. In audio production, listening to and providing feedback on each other's work is a crucial part of developing your ear and thus refining your skill as a producer or recording engineer. I will always do so in a spirit of collaboration and encouragement, and will always ask that your fellow students participate in that same spirit. We're all learning here—even me!

Behavioral Expectations: You can expect to have your academic performance evaluated fairly based on the standards communicated in this syllabus and any relevant program guidelines. You may utilize the Academic Complaint process if you have concerns with a decision made about your academic progress in the course. In exchange for this opportunity, you are expected to uphold the following behavioral expectations:

- Behave in accordance with the Student Code of Conduct and other applicable College policies
- Refrain from disrupting the ability of fellow students to learn or the instructor's ability to teach. Examples of disruption include:
  - Cell phone or computer use that significantly, or repeatedly, distracts others
  - Coming to class late or leaving early
  - Interrupting, discussing unrelated issues in class, or speaking frequently without being called on
  - Yelling or engaging in other aggressive behavior
- When interacting online, communicate in a respectful fashion. This includes, but is not limited to:
  - Refraining from name calling, posting inappropriate material, and typing in all capital letters
  - Sending multiple emails with one sentence
  - Avoiding rants or discussing non-relevant topics

Open discussion and disagreement are encouraged when done respectfully and in the spirit of academic discourse. There are a variety of behaviors that, while not against a specific College rule, may create disruption in this course. Students whose behavior is disruptive or who fail to comply with the instructor may be dismissed from the class for the remainder of the class period and may

be required to meet with the instructor or Dean prior to returning to the next class period. If necessary, referrals may also be made to the Student Conduct process for violations of the Student Code of Conduct.

At Our College

Academic Dishonesty: The College reserves the right to set and communicate reasonable standards of behavior. Students are expected to uphold college standards related to academic honesty. The following behaviors, as outlined in the Student Code of Conduct, are considered academic dishonesty and are prohibited. Examples are provided to illustrate the specific prohibition and are not intended to be all-inclusive.

- Cheating (accessing or using unauthorized materials or information)
- Plagiarism (reproducing someone else's words or ideas without accurate acknowledgment)
- Falsifying information (providing untrue information)
- Unauthorized collaboration (getting assistance or sharing work without permission)
- Facilitating academic dishonesty (participating in an act that creates an unearned advantage for someone)

Student Code of Conduct: Harper College encourages the intellectual and personal growth of its students as scholars and as citizens. The College has both the authority and responsibility to maintain a campus community where the educational programs can flourish for all students and where individual rights, personal and collective safety, and College operations are appropriately protected. It is a choice to attend Harper College and by doing so, students assume the obligations (including standards for behavior) imposed by the College.

Harper College students and student organizations are expected to act in accordance with the policies, rules, regulations, laws, and requirements of Harper College, municipalities and counties, the State of Illinois, and the United States. The Student Code of Conduct and related information at the Harper Student Conduct resource page outlines these expectations and provides resources and reporting options for students.

Equal Opportunity Statement: Harper College does not discriminate on the basis of race, color, religion, sex, national origin, ancestry, age, marital status, sexual orientation, disability or unfavorable discharge from military service. If you believe you have experienced discrimination or harassment (whether on or off campus) that affects your ability to participate in class or any of Harper College's programs, please seek assistance from any of the following resources:

- For gender-based or sexual misconduct (including sexual assault and sexual harassment) by any person, visit the Harper College Title IX resource page to learn more about your support and reporting options.
- For any other harassment/discrimination by an employee, contact the College's Chief Human Resources Officer at 847-925-6216.

Please be advised that faculty members are required to report to the College if they learn that a crime, harassment, or discrimination may have occurred.

Student E-mail Notifications & Privacy: All notifications related to student registration or other business activities are sent to students via their Harper College email account (XXXX@mail.harpercollege.edu) that is assigned to students upon registration. Students access this account via an icon in the student portal (where you registered for classes). Please check this e-mail frequently. To forward e-mails from this account to a personal email account please follow these instructions.

Please be advised that your education records are subject to a federal privacy law called the Family Education Rights and Privacy Act (FERPA). As a result, please be aware that you (not your parent(s), spouse, or other such person) will generally need to be the one to ask questions, file complaints, or otherwise interact with the College and faculty about your academic performance in this class.

Blackboard Privacy and Accessibility Statements: Blackboard is the learning management system used at Harper College. It provides a secure Web space for delivery of instructional course materials. Blackboard's privacy statement and accessibility statement are available for review.

Copyright Statement: The materials on this course website are only for the use of students enrolled in this course for purposes associated with this course and may not be retained or further disseminated. For more information, please visit the Harper College Copyright/Fair Use resource page.

Student Support Resources

Student Success

Access and Disability Services: Harper College strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let Access and Disability Services (ADS) know immediately at 847.925.6266. ADS will privately discuss the options you have, possible accommodations. You are welcome to register with Access and Disability Service by going to Access and Disability Services and filling out the application for ADS services. Once you have your accommodations approved by ADS, please make arrangements with the instructor as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

- Location: Building I, Room 103
- Phone: 847.925.6266
- Email: ads@harpercollege.edu
- To learn more visit: Access and Disability Services

Military and Veteran Students: The college recognizes the complexities of being a member of the military community and a student. If you are a member of the military community, please inform your instructor if you need accommodations. Drill schedules, calls to active duty, complications with GI Bill disbursement, and other unforeseen military and veteran related developments can complicate your academic life. If you make your instructor aware of a complication, they will do

everything they can to assist you or put you in contact with college staff who are trained to assist you.

Library: The library provides students access to resources through searchable databases and catalogs. Students can utilize the interlibrary loan service, laptop/calculator check-out, group study areas, computer workstations, and quiet study space.

- Location: Building F
- Phone: 847.925.6184
- Email: library@harpercollege.edu
- To learn more visit: Harper College Library

Student Service Desk (Computer Help): The Student Service Desk assists all students by providing information and support for Harper Student E-mail Accounts, MyHarper Student Portal, and Blackboard.

- Location: Building D, Room D116
- Phone: 847.925.6866
- Email: studentsd@harpercollege.edu

Computer Labs: Campus labs are staffed to assist students with logging on and off, accessing specific applications and printing their work. Labs are open to all currently enrolled Harper students.

- Locations: Building I, Room I223 & Avanté Center, Room Y203
- Phones: 847.925.6000 ext. 2372 and ext. 2870 (Building I) & 847.925.6966 (Avanté Center)
- To learn more visit: Harper College Computer Labs

Writing Center: The Writing Center tutors offer free writing assistance via walk-in or scheduled appointment. Students are welcome to bring in their writing assignments in any stage. A computer lab is also available so you can work on your writing assignments with the tutors.

- Location: Building F, Room F110
- Phone: 847.925.6796
- To learn more visit: Harper College Writing Center

Tutoring Center: Tutoring services are free for Harper College students in more than 100 courses. The Tutoring Center offers walk-in tutoring, tutoring by appointment, and final reviews in some courses.

- Location: Building F, Room F110
- Phone: 847.925.6539
- To learn more visit: Harper College Tutoring Center

Success Services: Success Services offers free, one-hour sessions to work with you on areas such as reducing stress, dealing with anxiety, building time management skills, becoming a more effective test taker, and more.

- Location: Building F, Room F110
- Phone: 847.925.6715

- To learn more visit: Harper College Success Services

Job Placement Resource Center (JPRC): Assists students to become successful in their search for employment opportunities. Help is available with resumes, interviewing, job search, co-ops and internships, and on-campus employment as Student Aides. Students can take advantage of JPRC services during walk-in hours or by scheduling an appointment.

- Location: Wojcik Conference Center, Room W207
- Phone: 847.925.6400
- To learn more visit: Harper College JPRC

Student Safety and Wellness

Counseling Services: Counseling Services promotes the academic success and personal well-being of students by providing personal counseling, wellness support, career and educational counseling. Services are available to currently enrolled students. All services are free of charge.

- Location: Building I, Room I117
- Phone: 847.925.6393

Hawks Care: It can be hard to focus on school when you are worried about everyday life. Maybe you are not sure how you can pay for school, while also paying for everyday expenses or your monthly bills. Maybe you are worried about the cost of food, or if your car can reliably make it to and from campus. Maybe you don't have the supplies you need for school, like a laptop or Wi-Fi internet connection, etc. Hawks Care at Harper is here to help!

- Visit this link to learn how Hawks Care can help you succeed: Hawks Care

Harper Early Alert Team (HEAT): HEAT is a multidisciplinary campus threat assessment and behavioral intervention team that guides the campus community in effectively assessing and addressing threatening and/or concerning behaviors. HEAT strives to assist the campus in intervening with someone before their behaviors reach a critical level.

- To learn more or to report a threat: Harper College HEAT

Harper College Police: Contact the Harper College Police for emergency assistance or to report a crime.

- Phone: 847.925.6330

MUS 203 Mixing and Mastering Techniques
Spring 2026 Course Schedule

week 1 (1/14): mixing—intro, history

week 2 (1/21): mixing—preparation

- begin Project 1: Set Up a Mixing Session in Pro Tools (due 1/28)

week 3 (1/28): mixing—analog routing and processing

- Project 1 due
- begin Project 2: Mix a Provided Song in Pro Tools—Analog (due 2/18)

week 4 (2/4): mixing—acoustic mixing techniques

week 5 (2/11): mixing—finalization

week 6 (2/18): mixing—EQ

- Project 2 due
- begin Project 3: Mix a Provided Song in Pro Tools—Digital (due 3/11)

week 7 (2/25): mixing—compression and limiting

week 8 (3/4): mixing—spatialization and phasing

week 9 (3/11): mixing—saturation and distortion

- Project 3 due
- begin Project 4: Mix Your Own Song in Pro Tools—Hybrid (due 4/8)

week 10 (3/18): mixing—automation and time-based processing

—spring break—

week 11 (4/1): mixing—bus processing

week 12 (4/8): mastering—preparation

- Project 4 due
- begin Project 5: Set Up a Mastering Session in Wave Lab (due 4/15)

week 13 (4/15): mastering—metering, imaging, and analysis

- Project 5 due
- begin Project 6: Master an EP in Wave Lab (due 5/6)

week 14 (4/22): mastering—EQ, compression, and spatialization

week 15 (4/29): mastering—finalization

week 16 (5/6): Final Listening Critique

- Project 6 due

MUS 203 Mixing and Mastering Techniques
Spring 2026 Course Syllabus

Documentation of Understanding

Syllabus Receipt

_____ I acknowledge that I have received and reviewed the course syllabus for _____ (course ID and name), _____ (semester and year).

❒ My course meets on _____ (days) at _____ (time) in room _____.

❒ My course is online, and can be accessed at Harper's Blackboard site

Syllabus Acknowledgement

_____ I have read the syllabus (either in paper or online), and I understand the classroom policies, instructor's expectations, and rules as stated in the syllabus for this course.

_____ I understand that I am responsible to complete all homework assignments, in-class activities, and class assessments by the due dates as outlined in the syllabus.

_____ I understand that attendance and participation in all course activities is essential for my success in this course.

_____ If I have any questions or concerns, I will contact the instructor for further explanation.

Student Signature

Print/Type Name: _____

Signed: _____ Date: _____

(If submitted electronically, the typed name plus submission of this statement in Blackboard or to the instructor via email constitutes student signature).