

Music 270 - INTRODUCTION TO MUSIC, SOUND, AND TECHNOLOGY

Fall 2025 - Hamilton College

Professor: Ryan Carter

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Office: List 234

Office hours: Tuesdays from 2:30-4:00pm in List 234 or by appointment
(in person or on Zoom: <https://hamilton.zoom.us/j/4795612100>)

COURSE DESCRIPTION:

An introduction to the essential tools of 21st-century musicians, with an emphasis on creative practice and critical reflection. Students will learn to record, edit, process, and synthesize sound digitally; produce music using MIDI keyboards and software instruments; distribute their work; and critically engage with topics linked to the emergence of digital audio technologies. Listening and reading will include a wide range of works by Halim El-Dabh, Karlheinz Stockhausen, Pauline Oliveros, Pamela Z, and others. Open to all students regardless of musical background; additional resources for relevant music theory will be provided.

EDUCATIONAL GOALS: Hamilton College encourages each of its students to pursue a course of study that fosters these eight educational goals:

<https://www.hamilton.edu/educational-goals-and-curriculum>

In particular, this course will engage the following:

Analytic Discernment: While we will use a variety of software applications with different user interfaces, the underlying mechanisms by which digital audio is recorded, synthesized, or processed follow similar patterns that are reducible to mathematical operations. This course will not require any advanced mathematics, but developing facility with the software we use will rely on understanding how a digital audio signal flows through the system.

Aesthetic Discernment: We will listen to a survey of music created by electronic means. Much of this work eschews familiar parameters of musical construction. While learning about the technologies employed by these composers, we will also discuss how to evaluate these compositions.

Creativity: There is no aesthetic agenda in this course; students are free to pursue any musical style. Projects will be evaluated based on technical facility, but also on creativity and clarity of expression. We will listen to and discuss all major projects in class.

APPOINTMENTS: I am happy to meet during office hours or schedule ad hoc appointments at our mutual convenience. If you are having trouble in the course, you should come see me.

TEXTS: There is no required text for this course; readings will be posted on Blackboard. However, I will request that you subscribe to Spotify (www.spotify.com), as this is how I will share playlists for listening assignments. Spotify operates on a monthly subscription plan, which you can cancel at the end of the course.

GRADING:

- 30%** Assignments
 - 10%** Listening reports
 - 15%** Project 1 (due Wednesday, October 8 at 2:30PM)
 - 15%** Project 2 (due Monday, November 10 at 2:30PM)
 - 30%** Final project (due Wednesday, December 17 at 5:00PM)
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LISTENING REPORTS: There will be approximately eight listening assignments, which will survey the history of electroacoustic music. Each will be shared as a playlist on Spotify. After listening to each playlist, you will write a brief listening report to post to Blackboard. Your listening reports should include the year(s) of composition, the medium and techniques of production (to the extent that you can hear or research these), and your reaction to each piece in the playlist. Please post your responses directly to the text box on Blackboard, rather than uploading an attached document. Make sure to cite your sources; for online sources, you can simply copy the link. **Listening reports are due at class time (2:30PM) so that we can discuss them in class.**

DISABILITIES: Hamilton College will make reasonable accommodations for students with properly documented disabilities. If you are eligible to receive an accommodation(s) and would like to make a formal request for this course, please discuss it with me during the first two weeks of class. You will need to provide Allen Harrison, Associate Dean of Students (Elihu Root House; 315.859.4021) with appropriate documentation of your disability.

COPYRIGHT AND ORIGINALITY: You will be recording and synthesizing your own sounds for this course. For most assignments, you must create your own sound clips. On those assignments that allow the incorporation of sounds that other people have created, you will need to cite your sources (e.g., by including a link to where you downloaded the recording).

ATTENDANCE: While there is no attendance grade, attending class is essential to understanding the material. If you anticipate an absence, please inform me by email at least 24 hours in advance. After two unexcused absences, each additional unexcused absence will lower your total grade by 5 points.

MUSIC THEORY RESOURCES: For each of the three units in this course, there will be a corresponding guide to relevant music theory topics. There is no expectation that you have any musical background before taking this course, so these guides are written with no presumption of prior knowledge. If you have any questions about a music theory topic, please come see me.

MUSIC CONCENTRATOR PROFICIENCIES: The concentration in music requires demonstrating proficiencies in music technology, and this course may partially fulfill that requirement. Please note that there are two components to the music technology proficiency requirement:

- 1) Music notation software: prepare a rehearsal-ready score and parts
 - 2) Audio recording and digital distribution: record yourself or someone else singing or playing an instrument, and make this publicly available online (e.g., on SoundCloud or YouTube). This component may be fulfilled with a grade of B or higher in this course.
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COURSE OUTLINE (subject to modification):

Sep. 1 - Oct. 1	Unit 1: Recording Sound	Software: Audacity, Pro Tools Topics: Introduction to digital audio Microphones and basic recording techniques Editing and mixing digital audio Digital signal processing Studio etiquette
Oct. 6 - Nov. 5	Unit 2: Making Sound	Software: Logic Topics: MIDI and MIDI controllers Digital audio synthesis Virtual instruments
Nov. 10 - Dec. 10	Unit 3: Sharing Sound	Software: Visual Studio Code, GitHub Desktop, and others Topics: Digital distribution of music Copyright