

Music 9739B: Cognitive Musicology
Don Wright Faculty of Music, Western University
Winter 2025

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Office hours: Wednesdays, 11:30 a.m. to 12:30 p.m. (Talbot College, Room 117)

Overview

While music scholars examine cultural and theoretical aspects of musical activity, psychologists and neuroscientists probe it for insights into the mind and brain. Humanistic and scientific approaches to music are often disconnected. This can lead to experiments with flawed stimuli or musicological writings with problematic assumptions about perception and cognition. Yet these approaches also complement each other: musical questions can inspire empirical studies, and suggestive experimental results prompt musicological interpretation and application. In this course, we'll discuss interactions between musicology and the cognitive sciences from the nineteenth century to the present. Throughout, we'll critically examine various aspects of musical activity – as well as the disciplines through which we study it.

Outcomes

By the end of this course, students will be conversant with current topics and methods in cognitive musicology, and they will have a sense of the field's history. They will be able to critically evaluate scientific and humanistic studies of music perception and cognition. And they will have developed skills related to interdisciplinary research, writing, and communication.

Materials

Readings and resources will be available via OWL. Our main text will be *The Science-Music Borderlands: Reckoning with the Past and Imagining the Future*, edited by Elizabeth H. Margulis, Psyche Loui, and Deirdre Loughridge (MIT Press, 2023). This open-access book is freely available at <https://doi.org/10.7551/mitpress/14186.001.0001>.

Evaluation

This course involves intensive reading, and I expect you to come to our meetings ready to discuss the assigned texts. Discussions will be evaluated based on your contributions to class discussion. For each class meeting, you will earn a participation point if you ask a question or make a comment about the week's material.

You will also give two presentations. The first will be fifteen minutes long and will introduce a topic that will not be studied by the class as a whole, by reviewing three articles of your choice. For this presentation, you will prepare a handout that includes a short annotated bibliography. You will sign up for a presentation date at our first meeting. The second presentation will involve a ten-minute lightning talk about your research project on April 1 (our final class meeting).

Your research project can take various forms, including (but not limited to) a design for an experiment; a critical essay on a topic related to music cognition; a cognition-inspired analysis of a particular piece, performance, or musical corpus; or a proposal for evidence-based pedagogical or practice techniques. Preliminary abstracts (250 words, maximum) will be due after the Spring Reading Week (February 25), and we will discuss them in class. You will submit a draft for peer review (March 25) and will provide a review for one of your classmates (April 4). The final version of your project will be due on April 18.

These elements will combine in your final grade as follows:

Discussions	10%
Peer Review	10%
Presentations	30% (2 × 15%)
Research Project	50%

Policies

Enrollment Restrictions. Enrollment in this course is restricted to graduate students in Music, as well as any student that has obtained special permission to enroll in this course from the course instructor as well as the Graduate Chair (or equivalent) from the student's home program.

Academic Offences. Scholastic offences are taken seriously, and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic offence, as found at https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf.

Health and Wellness. Students who are in emotional/mental distress should refer to Mental Health Support at <https://www.uwo.ca/health/psych/index.html> for a complete list of options about how to obtain help.

Accommodation for Medical Illness. The Graduate Program in Music recognizes that a student's ability to fulfill academic responsibilities may, on occasion, be impaired by illness or injury. To ensure fairness and consistency for all students, academic accommodation for work representing 10% or more of the student's course grade shall be granted only in cases where there is documentation indicating that the student could not reasonably be expected to meet the academic responsibilities. Documentation shall be submitted, as soon as possible, to the office of the Associate Dean (Graduate Studies), not to the course instructor.

Accessibility. Western is committed to achieving barrier-free accessibility for all its members, including graduate students. As part of this commitment, Western provides a variety of services devoted to promoting, advocating, and accommodating persons with disabilities in their respective graduate program.

Graduate students with disabilities (for example, chronic illnesses, mental health conditions, mobility impairments) are strongly encouraged to register with Accessible Education Western (AEW), a confidential service designed to support graduate and undergraduate students through their academic program. With the appropriate documentation, the student will work with both AEW and their graduate programs

(normally their Graduate Chair and/or Course instructor) to ensure that appropriate academic accommodations to program requirements are arranged. These accommodations include individual counselling, alternative formatted literature, accessible campus transportation, learning strategy instruction, writing exams and assistive technology instruction.

Gender-Based and Sexual Violence. Western is committed to reducing incidents of gender-based and sexual violence (GBSV) and providing compassionate support to anyone who is going through or has gone through these traumatic events. If you are experiencing or have experienced GBSV (either recently or in the past), you will find information about support services for survivors, including emergency contacts at the following website:

https://www.uwo.ca/health/student_support/survivor_support/gethelp.html To connect with a case manager or set up an appointment, please contact support@uwo.ca.

Generative Artificial Intelligence (GAI). GAI is still developing, with complex implications for research. In this course, you may not use GAI to produce text for assignments (e.g., peer review comments, project materials). You may use GAI-based tools to refine research questions, organize notes, check grammar and spelling, or obtain feedback on self-authored work for the purposes of revision. However, such uses should be cited in any relevant assignments, and you should keep a log of course-related GAI activity and be prepared to disclose this upon request. If you're unsure about whether a certain application of GAI is permitted, I'm happy to answer your questions.

Religious Accommodation. Students should consult the University's list of recognized religious holidays and should give reasonable notice in writing, prior to the holiday, to the Instructor and an Academic Counsellor if their course requirements will be affected by a religious observance. Additional information is given in the Western Multicultural Calendar: <https://www.edi.uwo.ca/resources/2025-Diversity-Calendar-PDF.pdf>.

SCHEDULE

Unless noted otherwise, all readings are from [The Science-Music Borderlands](#).

1. **Between Music and Science** (January 7)

Elizabeth H. Margulis, Psyche Loui, and Deirdre Loughridge, Introduction
Diana Deutsch, "Music Theory and Experimental Science" (Ch. 14)

2. **Evolutionary Origins** (January 14)

Margulis, Loui, and Loughridge, "Beyond Nature vs. Nurture" (Part I Introduction)
Aniruddh D. Patel, "Human Musicality and Gene-Culture Coevolution" (Ch. 1)
Gary Tomlinson, "Musical Meaning in Transspecies Perspective" (Ch. 2)

3. **Animal Musicality** (January 21)

Diandra Duengen, Marianne Sarfati, and Andrea Ravignani, "Cross-Species Research in Biomusicality" (Ch. 3)
Rachel Mundy, "Humane Treatment, Sound Experiments" (Ch. 4)

4. **Minds and Bodies** (January 28)

Margulis, Loui, and Loughridge, "Beyond Music as a Window into the Mind" (Part II Introduction)
Jonathan De Souza, "Music, Mind, Body, and World" (Ch. 6)
Maria A. G. Witek, "Rhythmic Entrainment and Embodied Cognition" (Ch. 7)

5. **Social Interactions** (February 4)

Haley E. Kragness, Erin E. Hannon, and Laura K. Cirelli, "The Musical Mind" (Ch. 8)
Jim Sykes, "The Science of Music Is about Relations" (Ch. 9)

6. **Music Studies and Neuroscience** (February 11) *Special Guest: Andrew Goldman*

Andrew Goldman, "Neuroscience in Music Research," *Music Perception* (forthcoming 2025): <https://doi.org/10.1525/mp.2025.42.3.1>.

Andrew Goldman, "Improvisation as a Way of Knowing," *Music Theory Online* 22, no. 4 (2016): <https://mtosmt.org/issues/mto.16.22.4/mto.16.22.4.goldman.html>.

Reading Week (February 15–23)

7. Histories (February 25) *Project Abstract Due*

Carmel Raz, "Of Sound Minds and Tuning Forks" (Ch. 5)

Francesca Brittan, "The Neural Orchestra," *Journal of the American Musicological Society* 77, no. 1 (2024): 1–63, <https://doi.org/10.1525/jams.2024.77.1.1>

8. Complex Systems (March 4)

Margulis, Loui, and Loughridge, "Beyond Reductionism" (Part III Introduction)

Jamal Williams and Matthew Sachs, "Combating Reductionism in Music Neuroscience with Ecologically Valid Paradigms (Ch. 11)

Sarah Faber and Randy McIntosh, "Hidden Repertoires in the Brain Accessed by Music in Aging and Neurodegeneration" (Ch. 12)

9. Creativity and Composition (March 11)

Eduardo Reck Miranda, "Toward Neurotechnology for Musical Creativity" (Ch. 10)

Grace Leslie, "Composing at the Border of Experimental Music and Music Experiment" (Ch. 13)

Pamela Z, Loui, and Loughridge, "Conversation with Pamela Z" (Ch. 15)

10. Musical Ability (March 18)

Margulis, Loui, and Loughridge, "Beyond Musicians and Nonmusicians" (Part IV Introduction)

Alexander W. Cowan, "'The Musical Mind Is the Normal Mind'" (Ch. 16)

Beatriz Ilari and Assal Habibi, "The Musician-Nonmusician Conundrum and Developmental Music Research" (Ch. 17)

11. Cross-Cultural Collaborations (March 25) *Project Draft Due*

Patrick E. Savage et al., "Building Sustainable Global Collaborative Networks" (Ch. 18)

Steven Feld et al., "Conversations with Steven Feld" (Ch. 19)

12. Final Presentations (April 1)

Peer Review Due (April 4)

Final Project Due (April 18)