

UMBC UGC New Course Request: MUSC 328 – Music and the Mind

Date Submitted: 10/31/2019

Proposed Effective Date: Summer 2019

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COURSE INFORMATION:

Course Number(s)	MUSC 328
Formal Title	Music and the Mind
Transcript Title (≤30c)	Music and the Mind
Recommended Course Preparation	MUSC 101 OR MUSC 102 OR MUSC 125
Prerequisite NOTE: Unless otherwise indicated, a prerequisite is assumed to be passed with a "D" or better.	(blank)
# of Credits Must adhere to the UMBC Credit Hour Policy	3.0
Repeatable for additional credit?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Max. Total Credits	3.0 This should be equal to the number of credits for courses that cannot be repeated for credit. For courses that may be repeated for credit, enter the maximum total number of credits a student can receive from this course. E.g., enter 6 credits for a 3 credit course that may be taken a second time for credit, but not for a third time. Please note that this does NOT refer to how many times a class may be retaken for a higher grade.
Grading Method(s)	<input checked="" type="checkbox"/> Reg (A-F) <input type="checkbox"/> Audit <input type="checkbox"/> Pass-Fail

PROPOSED CATALOG DESCRIPTION (Approximately 75 words in length. Please use full sentences.):

In this course, we will explore major topics in the interdisciplinary field of music cognition and perception, with a focus on how people perceive, remember, enjoy, and interact with music. This course will present topics on the primary aspects of the musical experience (pitch, rhythm, meter, and timbre), the mental synthesis of these elements into meaningful musical sound, aspects of musical development in children, music and language, individual differences between musicians and nonmusicians, and studies on musical memory, expectation, and emotion.

GEP Area & Functional Competencies:

Social Science; Critical Analysis & Reasoning; Scientific and Quantitative Reasoning

RATIONALE FOR NEW COURSE:**a) Why is there a need for this course at this time?**

The interdisciplinary field of music cognition and perception has been on the rise in the past decades as musicians and scientists seek to better understand our musical experiences through the lens of empirical research. At the moment, there is no course at UMBC covering this topic, and the Music Department believes that this new course is needed so that our students, both music majors and non-majors, can learn more about the many innovative and scientific studies on music. The interdisciplinary nature of this course also fit nicely into the CAHSS-STEM link initiative put forward in the recent Dean's Multi-year Objectives (2019-2022) for CAHSS.

b) How often is the course likely to be taught?

This course is currently planned to be taught during the summer and winter semesters, but it could possibly be moved to the regular semesters in a later time if enrollment proved to be promising.

c) How does this course fit into your department's curriculum?

The Music Department is expanding its offering of upper-level electives for our majors, and this course will be one of those electives. In addition, we are planning to add a Social Science GEP designation to this course so non-music majors can take this course to fulfill their upper-level and GEP requirements.

d) What primary student population will the course serve?

This course serves both music majors looking for an upper-level elective and non-music majors looking for an upper-level Social Science GEP course.

e) Why is the course offered at the level (ie. 100, 200, 300, or 400 level) chosen?

This course is offered at the 300 level because students are required to read academic journals in the field of music cognition throughout the course, and the final paper requires more advanced research and writing skills.

f) Explain the appropriateness of the recommended course preparation(s) and prerequisite(s).

This course is designed for all undergraduate students with a strong interest in understanding how humans perceive music, regardless of students' background in music. However, the ability to read music notation and the possession of a basic knowledge in music theory will be useful in understanding some of the course materials. Therefore, MUSC 101 Fundamentals of Music Theory, MUSC 102 Advanced Music Fundamentals (pending approval), or MUSC 125 Music Theory 1 are the recommended course preparations for this course.

g) Explain the reasoning behind the P/F or regular grading method.

Since this course will be taken as an upper-level elective for music majors and as an upper-level GEP course for non-music majors, students have to achieve a "C" or above to fulfill their degree requirements. Therefore, the regular grading method is needed.

h) Provide a justification for the repeatability of the course.

This course is not repeatable after a successful attempt.

ATTACH COURSE SYLLABUS (mandatory):

University of Maryland, Baltimore County
MUSC 328: MUSIC AND THE MIND

SEMESTER: Summer 2020 (Six-Week Summer Session I)

DATES: May 26 – July 1, 2020

ROOM: Online

INSTRUCTOR: Professor Joseph Siu – jsiu@umbc.edu

REQUIRED TEXT: Thompson, W. F. (2015). *Music, Thought, and Feeling: Understanding the Psychology of Music, Second Edition*. NY: Oxford University Press.
Website: www.oup.com/us/thompson

Articles for download on Blackboard <https://blackboard.umbc.edu>

COURSE DESCRIPTION

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GEP Area & Functional Competencies:

Social Science; Critical Analysis & Reasoning; Scientific and Quantitative Reasoning

STUDENT LEARNING OBJECTIVES

Students who successfully complete this course will be able to:

- Describe ways that study of music cognition aids our understanding of human cognition and development more generally.
- Compare aspects of musical structure, as a cognitive system, with other systems such as language, visual pattern perception, auditory scene analysis, and so on.
- Apply a basic understanding of theories of evolution, the physical properties of sound, principles of human development and learning, structure of the auditory system and brain, and theories of emotion, to the study of music.
- Understand the design of behavioral experiments, be able to critique experimental designs for confounds, to draw conclusions from data presented in experimental studies, and to extrapolate from these data ideas for future studies.
- Demonstrate this knowledge by comparing and contrasting a series of published music-cognitive experiments that test a single issue, writing a professional APA-style literature-review paper that explores their contents and findings.

ASSESSING YOUR LEARNING & GRADINGS

The weighting of your final grade in MUSC 328 will be as follows:

- 20% Reading Discussions on *Blackboard*
- 20% Test 1
- 20% Test 2
- 10% Research Paper Preparatory Assignments
- 30% Research Paper (APA-style literature review)

Grade ranges are as follows:

- A (90–100%) – Your work follows all instructions accurately, demonstrates strong understanding of the material, and expresses your ideas in an excellent and organized manner.
- B (80–89%) – Your work follows all instructions, demonstrates good understanding of the material, but needs more polished writing and careful organization.
- C (70–79%) – Your work only follows some instructions, shows only average understanding of the material, with little organization, and is not clearly written.
- D (60 – 69%) – Your work does not follow all directions, shows very little understanding of the material, lacks organization, and is poorly written.
- F (below 59%) – Your work does not follow directions, shows no understanding of the material and is poorly written.
- If you are using this course towards your major, minor, or GEP requirements, you must earn a “C” or higher in this course.

All online lectures, discussion prompts, and class materials will be posted on Blackboard. Please refer to the class schedule at the end of the syllabus for all the deadlines. You are responsible for observing the deadlines and pacing yourselves for the work that needs to be done throughout the semester.

REQUIREMENTS

(1) Reading Discussions on *Blackboard* – 20%

- There are readings assigned for each week. Students are required to complete the readings and write reflections on *Blackboard*, under “Reading Discussions.” All discussion prompts are posted ahead of time.
- There are two deadlines for posting your reflections:
 - (1) Discussions for Unit 1-3 must be posted by the end of the Test 1 period**
 - (2) Discussions for Unit 4-7 must be posted by the end of the Test 2 period**
- Your discussion grade is based on the number of times you participate and the quality of your thoughts in response to the readings.

(2) Tests 1 & 2 – 40% (non-cumulative, 20% each)

- Each test will examine your grasp of contents presented in the online lectures. Test questions will include a combination of terms (multiple choice, matching, fill-in-the-blank) and short essays that require you to synthesize information, compare and contrast articles, etc. All tests are non-cumulative.
- You will be given a whole week to complete each test.
- **Make-up tests are not possible** except for extreme illness requiring hospitalization or extreme family emergency. Both must be corroborated externally.

(3) Research Paper & Preparatory Assignments – 40%

- You will write a research paper (ca. 6-8 pages) that reviews the literature on a music-cognitive topic of your choice. The **four articles** chosen for the research review should be drawn from experimental studies published in professional journals. The paper will not only summarize the research, but will critique the strengths and weaknesses of publications, and hypothesize areas for of future research.
- Your paper must be typed and should adhere to the following style: 12-point font, double spacing, 1-inch margins on all sides. Please include internal citations when necessary as well as a reference list, both of which should adhere to the APA style.
- All papers must be carefully proofread for typographical errors as well as spelling and grammatical mistakes.
- The final paper will be completed in distinct stages (see below), with grades assigned at various “check points” in the process. Because of the size of the class and the nature of individualized research, we must adhere to this schedule.

Stage 1: Paper title & Article list (5%) – Due by the end of Week 2

- 5 points: 1 for title; 2 for article list in APA style; 2 for appropriate articles chosen.
1. Decide on a general area you wish to research. Then consult the search engine at UMBC’s Albin O. Kuhn Library (library.umbc.edu). Click on “articles” and type some keywords, including the word “experiment.” Articles must come from scientific research journals (not books, not web).
 2. Also try Google Scholar (scholar.google.com), type in keywords and “experiment.” Don’t pay for articles, you should have access through UMBC’s library. If you are off-campus, use UMBC’s VPN service to access these articles.
 3. Find **SIX** articles that seem appropriate for your project and come up with a title for your paper.

Stage 2: Paper outline & Annotated article list (5%) – Due by the end of Week 4

- 5 points: 3 for outline; 2 for annotated article list in APA style
1. After reading the articles, choose the best **FOUR** and identify “themes” or issues that you will address in your paper: What issues do the articles have in common? What research methods do they share? What flaws do you see? What remains to be done?
 2. Write an outline that is organized by topic or issue, common themes that arose in the articles. Most will begin with introduction/overview of issues and end with discussion of flaws in the studies and areas that still need to be explored.
 3. End with an annotated article list in APA style. For each article, you will provide a 3-4 sentence summary and justification on why it should be included in your paper.

Stage 3: Final paper (title page, abstract, body, references list) 30% - Due by the end of Week 6

- 30 points: 5 for organization and clarity of writing; 5 for effective intro and conclusion, 15 for accurate discussion of articles chosen; 5 for paper format, APA citations/references.

Your paper should set the articles chosen into a context. What are the primary issues in this field? How do these authors tackle the issues? Do the articles come to similar conclusions/results, or do they differ in their findings? Where do you see flaws or issues not resolved? Be sure that you are thorough in describing the studies (who are the subjects, how many, what tasks are they asked to complete, what are the findings), but don't limit your paper to article description.

Late papers are not accepted. Each late paper means a zero.

LIST OF SOME MAJOR COGNITION JOURNALS

Journals devoted almost exclusively to music cognition research:

- Music Perception
- Psychology of Music
- Musciae Scientiate
- Psychomusicology
- Empirical Musicology Review
- Journal of New Music Research

Journals that have occasional articles on music cognition research:

- Journal of Experimental Psychology: Human Perception and Performance
- Journal of Experimental Psychology: Learning memory and Cognition
- Journal of the Acoustical Society of America
- Journal of Cognitive Neuroscience
- Psychological Review
- Psychological Bulletin
- Attention, Perception, & Psychophysics (formerly Perception & psychophysics)
- NeuroImage
- Psychophysiology
- Nature
- Nature Neuroscience
- Current Biology
- Neuron

TECHNICAL REQUIREMENTS

Online lectures are shared on Blackboard via Panopto. The Panopto video links to weekly lectures will be posted ahead of time. If you have difficulty accessing the lectures, please let me know as soon as possible.

Here is the link to UMBC's Panopto FAQ:

<https://wiki.umbc.edu/display/faq/Panopto>

ACADEMIC INTEGRITY

By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal. To read the full Student Academic Conduct Policy, consult the UMBC Student Handbook, the Faculty Handbook, or the UMBC Policies section of the UMBC Directory.

STUDENT DISABILITY SERVICES

UMBC is committed to eliminating discriminatory obstacles that may disadvantage students based on disability. Services for students with disabilities are provided for all students qualified under the Americans with Disabilities Act (ADA) of 1990, the ADAAA of 2009, and Section 504 of the Rehabilitation Act who request and are eligible for accommodations. The Office of Student Disability Services (SDS) is the UMBC department designated to coordinate accommodations that would allow students to have equal access and inclusion in all courses, programs, and activities at the University.

If you have a documented disability and need to request academic accommodations, please refer to the SDS website at sds.umbc.edu for registration information and to begin the process, or alternatively you may visit the SDS office in the Math/Psychology Building, Room 212. For questions or concerns, you may contact the SDS office through email at disability@umbc.edu or phone (410) 455-2459. If you require accommodations for this class, please email me to discuss your SDS-approved accommodations.

TITLE IX INFORMATION

As an instructor, I am considered a Responsible Employee, per UMBC's Policy on Prohibited Sexual Misconduct, Interpersonal Violence, and Other Related Misconduct. While my goal is for you to be able to share information related to your life experiences through discussion and written work, I want to be transparent that as a Responsible Employee I am required to report disclosures of sexual assault, domestic violence, relationship violence, stalking, and/or gender-based harassment to the University's Title IX Coordinator.

As an instructor, I also have a mandatory obligation to report disclosures of or suspected instances of child abuse or neglect. The purpose of these reporting requirements is for the University to inform you of options, supports and resources; you will not be forced to file a report with the police. Further, you are able to receive supports and resources, even if you choose to not want any action taken. Please note that in certain situations, based on the nature of the disclosure, the University may need to take action.

TENTATIVE SCHEDULE OF TOPICS AND READINGS

The instructor reserves the right to modify this schedule as needed during the semester.

Date	Topic	Reading
Unit 1: Introduction, Music and Evolution, Research Methods		
Week 1.1	Intro. to Music Cognition	Mehr et al. (2018), Yong (2018), Thompson, Ch. 1
Week 1.1	Origins of Music	McDermott & Hauser (2005), Thompson, Ch. 2
Week 1.2	Empirical Research Methods	Levitin (1999); Windsor (2004)
Unit 2: Pitch Perception and the Auditory System		
Week 1.2	Pitch Perception & Absolute Pitch	Levitin & Rogers (2005); Schellenberg & Trehub (2003)
Week 2.1	Sound & the Auditory System	Thompson, Ch. 3
Week 2.1	Pitch Illusions & Pitch Memory; Relative Pitch/Contour	Deutsch (1991); Schellenberg et al. (1999)
Week 2.2	Timbre, Pitch, & Perception	Eitan & Rothschild (2011)
Unit 3: Perception of Tonal Structure		
Week 2.2	Perceiving Music Structure	Thompson, Ch. 4
Week 3.1	Tonal Hierarchy; APA style	Krumhansl & Shepard (1979)
Week 3.1	Tonality and Expectation	Huron, Ch. 9
Week 3.2	TEST 1, Blackboard discussion due	
Unit 4: Rhythm and Meter		
Week 4.1	Expectation in Time; Beat Induction	Huron, Ch. 10; Schachner et al. (2009)
Week 4.1	Rhythm & Grouping	Iverson et al (2008); Phillips-Silver & Trainor (2005)
Unit 5: Musical Development		
Week 4.2	Infant Testing Methods; Consonance/Dissonance	Thompson, Ch. 5 "Music Acquisition"
Week 4.2	Learning, Enculturation of scales & rhythm	Trainor & Trehub (1992); Hannon & Trehub (2005)
Week 5.1	Development: harmonic sense	Corrigall & Trainor (2010)
Unit 6: Music, Brain, and Language		
Week 5.1	Brain Anatomy & Imaging, Synaesthesia	Thompson, Ch. 6 "Music and the Brain"
Week 5.2	Brain Plasticity, Music Amusia	Schlaug (2001); Peretz & Hyde (2003)
Week 5.2	Music and Language	Patel & Daniele (2003); Patel (2005)
Unit 7: Effects of Music		
Week 6.1	Music, Emotion, Performance	Gabrielsson & Juslin (1996); Tsay (2013)
Week 6.1	The Mozart Effect	Thompson et al (2001); Rauscher et al (1993)
Week 6.2	TEST 2, Blackboard discussion and Research Paper due	

Readings Bibliography

- Corrigall, K. A., & Trainor, L. J. (2010). Musical enculturation in preschool children: Acquisition of key and harmonic knowledge. *Music Perception: An Interdisciplinary Journal*, 28 (2), 195-200.
- Deutsch, D. (1991). The tritone paradox: An influence of language on music perception. *Music Perception: An Interdisciplinary Journal*, 8 (4), 335-347.
- Eitan, Z., & Rothschild, I. (2011). How music touches: Musical parameters and listeners' audio-tactile metaphorical mappings. *Psychology of Music*, 39 (4), 449-467.
- Gabrielsson, A., & Juslin, P. N. (1996). Emotional expression in music performance: Between the performer's intention and the listener's experience. *Psychology of music*, 24 (1), 68-91.
- Hannon, E. E., & Trehub, S. E. (2005). Tuning in to musical rhythms: Infants learn more readily than adults. *Proceedings of the National Academy of Sciences*, 102 (35), 12639-12643.
- Huron, D. B. (2006). *Sweet anticipation: Music and the psychology of expectation*. MIT press.
- Iversen, J. R., Patel, A. D., & Ohgushi, K. (2008). Perception of rhythmic grouping depends on auditory experience. *The Journal of the Acoustical Society of America*, 124 (4), 2263-2271.
- Krumhansl, C. L., & Shepard, R. N. (1979). Quantification of the hierarchy of tonal functions within a diatonic context. *Journal of experimental psychology: Human Perception and Performance*, 5 (4), 579.
- Levitin, D. J. (1999). Experimental design in psychoacoustic research. In P. Cook (Ed.), *Music, cognition, and computerized sound* (pp. 299-328). Cambridge: MIT Press.
- Levitin, D. J., & Rogers, S. E. (2005). Absolute pitch: perception, coding, and controversies. *Trends in cognitive sciences*, 9 (1), 26-33.
- McDermott, J., & Hauser, M. D. (2005). Probing the evolutionary origins of music perception. *Annals of the New York Academy of Sciences*, 1060 (1), 6-16.
- Mehr, S. A., Singh, M., York, H., Glowacki, L., & Krasnow, M. M. (2018). Form and function in human song. *Current Biology*, 28 (3), 356-368.
- Patel, A. D. (2005). The relationship of music to the melody of speech and to syntactic processing disorders in aphasia. *Annals of the New York Academy of Sciences*, 1060 (1), 59-70.

- Patel, A. D., & Daniele, J. R. (2003). An empirical comparison of rhythm in language and music. *Cognition*, *87* (1), B35-B45.
- Peretz, I., & Hyde, K. L. (2003). What is specific to music processing? Insights from congenital amusia. *Trends in cognitive sciences*, *7* (8), 362-367.
- Phillips-Silver, J., & Trainor, L. J. (2005). Feeling the beat: movement influences infant rhythm perception. *Science*, *308* (5727), 1430-1430.
- Rauscher, F. H., Shaw, G. L., & Ky, C. N. (1993). Music and spatial task performance. *Nature*, *365* (6447), 611.
- Schachner, A., Brady, T. F., Pepperberg, I. M., & Hauser, M. D. (2009). Spontaneous motor entrainment to music in multiple vocal mimicking species. *Current Biology*, *19* (10), 831-836.
- Schellenberg, E. G., Iverson, P., & Mckinnon, M. C. (1999). Name that tune: Identifying popular recordings from brief excerpts. *Psychonomic bulletin & review*, *6* (4), 641-646.
- Schellenberg, E. G., & Trehub, S. E. (2003). Good pitch memory is widespread. *Psychological Science*, *14* (3), 262-266.
- Schlaug, G. (2001). The brain of musicians: a model for functional and structural adaptation. *Annals of the New York Academy of Sciences*, *930* (1), 281-299.
- Thompson, W. F. (2015). *Music, thought, and feeling: Understanding the psychology of music*. Oxford University Press.
- Thompson, W. F., Schellenberg, E. G., & Husain, G. (2001). Arousal, mood, and the Mozart effect. *Psychological science*, *12* (3), 248-251.
- Trainor, L. J., & Trehub, S. E. (1992). A comparison of infants' and adults' sensitivity to Western musical structure. *Journal of Experimental Psychology: Human Perception and Performance*, *18* (2), 394.
- Tsay, C. J. (2013). Sight over sound in the judgment of music performance. *Proceedings of the National Academy of Sciences*, *110* (36), 14580-14585.
- Windsor, W. L. (2004). Data collection, experimental design, and statistics in musical research. In E. Clarke & N. Cook (Eds.), *Empirical musicology: Aims, methods, prospects* (pp. 197-222). Oxford University Press.
- Yong, E. (2018). A study suggests that people can hear universal traits in music: But some music scholars have doubts. *The Atlantic*, January 25.