

Term Information

Effective Term Spring 2014

General Information

Course Bulletin Listing/Subject Area Music
Fiscal Unit/Academic Org School Of Music - D0262
College/Academic Group Arts and Sciences
Level/Career Undergraduate
Course Number/Catalog 3343
Course Title Music, Body and Brain
Transcript Abbreviation Music/Body/Brain
Course Description An introduction to the relationship between culturally conditioned musical experience and physiological and cognitive processes.
Semester Credit Hours/Units Fixed: 3

Offering Information

Length Of Course 14 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? No
Grading Basis Letter Grade
Repeatable No
Course Components Lecture
Grade Roster Component Lecture
Credit Available by Exam No
Admission Condition Course No
Off Campus Never
Campus of Offering Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites Prereq: English 1110 or equivalent
Exclusions

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code 50.0901
Subsidy Level Baccalaureate Course
Intended Rank Freshman, Sophomore, Junior, Senior

Quarters to Semesters

Quarters to Semesters

New course

Give a rationale statement explaining the purpose of the new course

The overall goal of this course is to develop students' understanding of the basic connections between music, body, and brain. They will learn how both the physical structure of musical sounds and our perception influence how music interacts with us

Sought concurrence from the following Fiscal Units or College

Requirement/Elective Designation

General Education course:

Visual and Performing Arts

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- 1. Students understand basic connections between music, body, and the brain.
- 2. Students understand the relationship between the structure of musical sound and the perception of that sound.

Content Topic List

- Music basics, features, sound
- Modes of listening and the listening experience
- Metaphors and the body
- How music affects breathing

Attachments

- 3343 MusicBodyBrain proposal GE rationale assessment 2013REV2.pdf: GE rationale statement
(Other Supporting Documentation. Owner: Banks, Eva-Marie)
- 3343 MusicBodyBrain proposal syllabus 2013REV2.pdf
(Syllabus. Owner: Banks, Eva-Marie)

Comments

- See 4-29 e-mail to T. Leasure. *(by Vankeerbergen, Bernadette Chantal on 04/29/2013 01:33 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Banks, Eva-Marie	04/19/2013 12:24 PM	Submitted for Approval
Approved	Leasure, Timothy Lee	04/19/2013 12:36 PM	Unit Approval
Approved	Heysel, Garrett Robert	04/22/2013 02:39 PM	College Approval
Revision Requested	Vankeerbergen, Bernadette Chantal	04/29/2013 01:33 PM	ASCCAO Approval
Submitted	Banks, Eva-Marie	04/30/2013 10:36 AM	Submitted for Approval
Approved	Leasure, Timothy Lee	04/30/2013 10:43 AM	Unit Approval
Approved	Heysel, Garrett Robert	04/30/2013 02:10 PM	College Approval
Pending Approval	Nolen, Dawn Jenkins, Mary Ellen Bigler Vankeerbergen, Bernadette Chantal Hogle, Danielle Nicole Hanlin, Deborah Kay	04/30/2013 02:10 PM	ASCCAO Approval

MUSIC 3343

Music, Body, and Brain

Course Description

Music moves and touches us in many ways; there seems to be a quintessential relation between music, our body, and our brain. Yet answers to the question of what exactly this relationship is are not always easy to come by. This course offers an introduction to the complex relationship that involves sensory (auditory, kinesthetic, and visual), motor, and cognitive components. It offers an orientation to help students understand the various experiences of this music-body relationship related to sensation, perception, creation/production, interpretation, and communication. As the notions of both 'music' and 'body' have many meanings, the course also explores how their relationship is influenced by various cognitive, aesthetic, cultural, social, and historical factors.

This course introduces an overview of some central aspects of the music-body-brain relationship, presents relevant research illustrating how both culture and physiology shape this interaction, and critically reviews the information and misinformation that have become available in recent decades. Additional in-class demonstrations and experiments will give students a better understanding of some of the research methods applied in this field, and through various case studies they will learn how interdisciplinary approaches help us understand the multiple ways in which culturally shaped music-making and the human body interact.

GE Visual and Performing Arts

Goals:

Students evaluate significant works of art in order to develop capacities for aesthetic and historical response and judgment; interpretation and evaluation; critical listening, reading, seeing, thinking, and writing; and experiencing the arts and reflecting on that experience.

Expected Learning Outcomes:

1. Students analyze, appreciate, and interpret significant works of art.
2. Students engage in informed observation and/or active participation in a discipline within the visual, spatial, and performing arts.

The overall goal of this course is to develop students' understanding of the basic connections between music, body, and brain. They will learn how both the physical structure of musical sounds and our culturally conditioned perception influence how music interacts with our bodies. They will learn to appreciate the need for, and the

benefits of, applying multi-disciplinary perspectives in the exploration of this multifaceted relationship. Students also learn about a variety of theoretical and methodological approaches suitable for exploring this topic. The course will help students bring together and apply knowledge from ethnomusicology, neuroscience, and psychology to support a critical evaluation of the considerable amount of information on the music-body relationship made available by current media.

In order to meet these goals, students will listen to a wide variety of types of music: traditional genres from different cultures around the world as well as selected types of classical and popular music. They will learn to focus on particular structural elements – especially rhythm, tempo, and meter; melodic contour and shape; emotional implications of song texts; texture; dynamics; timbre, harmonics and overtones – and on the interaction of these elements in particular pieces of music, which exemplify genres. They will learn how cultural contexts and performance contexts affect the way music is perceived and the way the body reacts to music. By encouraging students to observe, analyze, discuss, and evaluate the ways different types of music affect our bodies and how the body shapes our experience of music, this course will satisfy the expected learning outcomes of the Visual and Performing Arts category of the GE.

Required Texts

Reading material for this course consists of excerpts from three books, by Levitin, Mithen, and Sacks (available for purchase in paperback format, at the usual campus area bookstores), class readings prepared by the lecturer, and occasional web site articles (listed in the weekly schedule).

D. J. Levitin (2006): *This Is Your Brain On Music: the Science of a Human Obsession*. Paperback. New York: Plume, Penguin USA. ISBN 978-0-452-28852-2

S. Mithen (2007): *The Singing Neanderthals: the Origins of Music, Language, Mind, and Body*. Paperback. Cambridge: Harvard University Press. ISBN 978-0674025592

O. Sacks (2007) *Musicophilia: Tales of Music and the Brain*. Paperback. New York: Vintage Books. ISBN 978-1400033539 (Revised & Expanded: 2008)

Lecturer-designed readings, available on the Carmen class web site. These will typically be 3- or 4-page typescripts.

Lecture notes are accessible on the Carmen class web site.

Course Requirements

Success in the course depends on active participation; there will be in-class assignments, activities (listening, analysis, and evaluation of music and sound examples), and demonstrations. Students will be awarded grades earned only by completing the assignments listed below. For the required research paper students may choose between two varieties of topics, either an analysis based on relevant readings of the student's choice, or an analytical observation of a musical performance in which the student applies the concepts learned in class. The paper is expected to be 8-10 pages long, typed, double-spaced using a scholarly-appropriate 12-point font, presented in a prose essay format, and accompanied with relevant references to cited sources. Students will submit a two-page proposal in Week 6, which summarizes the topic, the proposed approach, and principal references. The instructor will return the proposals, with feedback, in Week 8. (The proposal does not receive a letter grade but is a course requirement.) Students may follow the style manuals recommended by their departments or majors.

15%	Midterm Test I	15%	Midterm Test II
30%	Final Test	20%	Research Paper (and Proposal)
20%	Class Participation/In-Class Assignments		

Please note that all assignments must be completed in order to receive a passing grade for the course.

GRADING:	100 – 94	A	83 – 80	B-	69 – 67	D+
	93 – 90	A-	79 – 77	C+	66 – 64	D
	89 – 87	B+	76 – 74	C	63 – 60	D-
	86 – 84	B	73 – 70	C-	59 and less	E

Attendance Policy

Students are expected to attend class regularly. Students who miss class will not be able to make up in-class work; no special accommodations will be made for students who do not attend class. Only those students who contact the instructor **before** a scheduled exam **and** who provide an acceptable excuse may be allowed to make up a missed exam.

Disability Policy

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The

Office for Disability Services is located in 150 Pomerene Hall,
1760 Neil Avenue; telephone 292-3307, TDD 292-0901;
<http://www.ods.ohio-state.edu/>.

Plagiarism and Academic Misconduct

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct http://studentlife.osu.edu/pdfs/csc_12-31-07.pdf.

Weekly Schedule

Week 1) Course introduction

Everybody’s music – process and activity
Music basics, features of sound

Reading: Will: Class Reading Week 1
Levitin: Ch.1, pp.13-55

Week 2) Hearing and listening

Sound categories (animate vs inanimate, musical vs non-musical, vocal vs instrumental)
Modes of listening and listening experience

Music examples: Western classical and popular music, music from China, Bali, and West Africa

Reading: Levitin: Ch.5, pp.133-67

Week 3) How do we (and other people) talk about music?

Metaphors and the body
Music that touches and music that moves

Music examples: Western classical, Central African, Indonesian music

Reading: Will: Class Reading Week 3
Sacks: Ch. 4, pp.32-43

Week 4) Music & body movements

Rhythms in the body – rhythms of the body
(Locomotion, periodic movement, music coordinating movements, movements coordinating music, synchronization)

Music examples: Work songs, dance music, march music

Reading: Sacks: Ch. 19, pp.254-269
Levitin: Ch.2, pp.57-82

Second meeting week 4: Midterm I

Week 5) Music & heart

Music examples: New Age, film music

Reading: Will: Class Reading Week 5

Week 6) Music & breathing

How music affects breathing
Music and breathing in cross-cultural perspective

Music examples: Vocal and flute music from Europe, Japan, Australia, India, Middle East, and Africa

Reading: Will: Class Reading Week 6

Second meeting week 6: Research Proposal due

Week 7) Music & brainwaves

Reading: <http://www.mindpowermp3.com/Frequencies-music-and-transformation-How-our-audios-work.html>

Will: Class Reading Week 7

Week 8) Music & other brain activities and cognitive processes

Mozart effect?

Music examples: mainly Mozart

Reading: Sacks: Ch. 7, pp.93-104
Levitin, Ch.7, pp.193-221

Second meeting week 8: Midterm II; instructor returns Research Proposals

Week 9) Music & memory

How music affects memory
'Musical' memory (memory for music)

Music examples: Australian, Balkan, Iranian, European symphonic music

Reading: Will: Class Reading Week 9
Sacks: Ch. 15, pp. 201-231

Week 10) Music & affect (emotions & mood)

Music examples: music of S.E. Asia, Italy, Brazil, North America; lullaby

Reading: Sacks: Ch. 26, pp.333-338
Levitin, Ch.6, pp.169-192

Week 11) Music & therapy

Melodic intonation therapy
Entrainment & Parkinson's (Thauth project)

Reading: Sacks: Ch. 16, pp. 232-242;
<http://news.stanford.edu/pr/2006/pr-brainwave-053106.html>

Week 12) Music & animals

Do animals have music? Are animals affected by music?

'Music' examples: whales, birds, amphibians, primates

Reading: Mithen: Ch.8, pp.105-121
Will: Class Reading Week 12

Second meeting week 12: Research Paper due

Week 13) How did humans come to their music?

Music examples: (reconstructed) pre-historic instruments

Reading: Mithen: Ch.17, p.266-278
Will: Class Reading Week 13

Week 14) Music & action: integrative sensory-motor view of music and the body

Reading: Will: Class Reading Week 14

Finals period: Final exam

MUSIC 3343

Music, Body, and Brain

GE Rationale and Assessment Plan

Rationale:

The course objectives (given under “Course Description” and “GE Visual and Performing Arts,” on pp. 1-2 of the syllabus) address the Visual and Performing Arts expected learning outcomes by proposing to introduce students to the structural elements and performance contexts of many genres of music, and asking students to understand these genres according to the complex relationship between the cultural conditioning of the communities that produced the music and the music’s physiological effects. In addition, the course objectives invite students to think critically and analytically about the disciplinary approaches to the topic and the information and misinformation that have circulated on certain aspects of the music-body relationship. This course is not devoted to sacralizing musical works as “museum pieces”; rather, the focus is on the musical experience in various contexts. Students will come away with a new level of understanding, which they can apply in the concert hall, at the stadium, in church, in private spaces where they listen online or on an ipod – wherever they listen to (or produce) music of all varieties.

The course readings introduce the technical terms for musical features to be discussed, and the theoretical approaches for studying the music-body-brain relationship. They also give additional examples and case studies beyond those to be presented in class. On occasion they analyze misinformation that has found its way into general circulation. The professor’s “Class Readings” deal with issues for which the available published readings are too technical for a general undergraduate audience.

Some of the course topics relate directly to critical evaluation of the musical experience. For instance, evaluating the so-called “Mozart effect” (the notion that listening to Mozart makes one smarter, which surfaced in the early 1990s) involves identifying the relevant dynamic, metrical, and harmonic features of Mozart’s music, and asking what other types of music share these features. (In week 8 the reading by Levitin gives the history of the controversy and illuminates the interaction between listening and cognitive processes; the complementary reading by Sacks deals more with individual clinical cases.) Other topics are more concerned with the way different cultures think about and understand music. For instance, the Western metaphor of “high” and “low” pitch (week 3) is rooted in visualized frequency relationships, whereas in Central and West Africa, the reversed metaphor has to do with the physical structure of the balafon and the performer’s position on the ground: the instrument’s deep pitches are perched *high* over a resonator, and its high-frequency pitches are *low*, near the ground. Still other topics may seem to be only indirectly about pieces of music, and yet they powerfully illuminate the musical experience. A central example is “entrainment,” the synchronization of internal rhythms (brainwaves/body motions) to external musical stimuli. In week 4 the topic will be introduced; in week 7 it will be explained as a

technical concept; in weeks 9 and 11 it will be applied to actual music – for instance, that of the Balkan singer who can memorize a lengthy epic without notation because it is sung rather than spoken. Indeed, entrainment applies to the lullaby (week 10), where the familiar timbre and soft dynamic level of the mother’s voice, and absence of exciting rhythms, are only part of the story; by holding her baby close while singing, the mother facilitates a synchronization between the baby’s internal rhythms and her own.

The central writing experience of the course, the research paper, will encourage students to think critically and write clearly about the musical experience; the required proposal for the paper gives them an opportunity for feedback on their ideas; and finding sources for the paper will improve their information literacy.

The in-class projects, where students will perform a listening exercise or watch a scientific demonstration together and discuss the experience, will give them practice at effective oral communication about music. In addition to the research paper, essay questions on exams will sharpen their written communication skills.

Assessment Plan:

The instructor will collect assessment data using both direct and indirect methods. Direct assessment will be accomplished with embedded exam questions. Two examples follow:

(related to week 4, “Music and body movements”)

You will hear an excerpt from a piece of music; it will be played twice. Do you think this could be a work song? Write a paragraph explaining why or why not.

(related to week 2, “Hearing and listening”)

Write an essay discussing the difference between attending a rock concert and attending a symphony orchestra concert. Focus on the attitude of the listener, the nature of the listening experience, and the reaction of the listener’s body to the music.

Indirect assessment will be accomplished with a brief exit survey, appended to the final exam:

(Likert scale: not at all, not very much, a fair amount, a good amount, a great deal)

1. Has this course helped you to understand the relationship between music and our bodily responses to it?
2. Has this course helped you to understand how people in different societies appreciate and think about music in different ways?
3. Did this course improve your insight into how different disciplines work together to help us understand the music-body-brain relationship?

If the grades on an embedded essay question fall naturally into a bell curve, with the mean value at approximately 75% (i.e, at a grade of C), the learning outcome will be deemed a success. A higher number of excellent or very good answers is of course

desirable. As for the exit survey, no more than 25% should respond “not at all” or “not very much”; at least 25% should respond “a good amount” or “a great deal.”

The instructor will collect and archive the assessment data on his own computer. He will use these data and the SEI process to evaluate the success of the course and make adjustments accordingly. The instructor will also share assessment data with the head of the Musicology Area.

The professor proposing this course, Udo Will, holds two doctorates, one in ethnomusicology and the other in neurobiology. He directs the School of Music’s graduate program in cognitive ethnomusicology, the study of music in culture using the methodologies of the cognitive sciences.