

**McMaster University**  
**COURSE OUTLINE January, 2011**  
**PSYCH3MA3 Neuroscience of Music Cognition**

**Instructor:** Dr. Laurel Trainor    Psychology Building 309  
[LJT@mcmaster.ca](mailto:LJT@mcmaster.ca)    905-525-9140 x23007

**Course TA:** Pat Savage    [savagepe@mcmaster.ca](mailto:savagepe@mcmaster.ca)    905-525-9140 x21443

**Location:**    BSB 121

**Time:**    Mondays 8:30-9:20am; Wednesdays 8:30-10:20am

**Office hours:** By appointment

**Course Objectives.** In this course we will examine perceptual, cognitive, emotional, and developmental aspects of music from a neuroscience point of view. The roles of evolution, biology, innate factors, and experience in human musical activity and ability will be considered. The class will be run as a seminar, and students are expected to read the assigned papers before class and to participate in class discussions. Students will work in groups, do presentations in class, read primary source materials, and learn to think critically.

**Course Schedule** (subject to revision)

Readings are available for download from the psychology web pages ([www.science.mcmaster.ca/psychology/undergraduate.html](http://www.science.mcmaster.ca/psychology/undergraduate.html)). Click on Level 3, then 3MA3. The password is "music".

**Jan 3**                      *Overview*

**Jan 5**                      *Is music an evolutionary adaptation?*  
1. McDermott & Hauser, 2005  
2. Lewis, 2002

**Jan 10, 12**                *Tonal structure in music*  
3. Poulin-Charronnat, Bigand & Koelsch, 2006  
4. Zatorre, 2001

**Jan 17, 19**                *Rhythm and movement*  
5. Zatorre, Chen & Penhune, 2007  
6. Grahn & Brett, 2007  
7. Patel, Iversen, Bregman & Schulz, 2009

**Jan 24, 26**                *Expectation & meaning*  
8. Meyer, 1956  
9. Trainor & Zatorre, 2009

<b>Jan 31, Feb 2</b>	<b><i>Amusia, Music and Language</i></b> 10. Peretz, 2001 11. Koelsch et al., 2002 12. Loui, Alsop & Schlaug, 2009 13. Moreau, Jolicoeur & Peretz, 2009
<b>Feb 7, 9</b>	<b><i>Musical Development</i></b> 14. Trainor, 2005 15. Hannon & Trainor, 2007 16. Winkler et al., 2009 17. Phillips-Silver & Trainor, 2005
<b>Feb 14, 16</b>	<b><i>Cortical plasticity, learning, and effects of musical experience</i></b> 18. Elbert et al., 1995 19. Pantev et al., 2001 20. Schellenberg, 2005 21. Trainor, Shahin & Roberts, 2009 22. Jentschke & Koelsch, 2009
<b>Reading Week</b>	
<b>Feb 28, Mar 2</b>	<b><i>Experiencing &amp; performing music</i></b> 23. Limb & Braun, 2008 <b><i>Autobiographical memory for music</i></b> 24. Janata, 2009
<b>Mar 7, 9</b>	No class, work on presentations
<b>Mar 14, 16</b>	No class, work on presentations
<b>Mar 21, 23</b>	Presentations
<b>Mar 28, 30</b>	Presentations
<b>Apr 4</b>	Summary

### **Academic Dishonesty Policy Reminder**

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g., the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at <http://www.mcmaster.ca/academicintegrity>.

## Evaluation

Late assignments will not be accepted unless prior arrangements have been made with the instructor.

**20% Attendance and participation.** Note that for high marks, comments and questions must make an intellectual contribution.

**16% Critiques**

**4% Progress Report on Grant Proposal.** Due March 2nd

**15% Written Grant Proposal.** Due the class before your oral presentation.

**15% Oral Presentation of Grant Proposal.**

**10% Peer Evaluation of Grant Proposal.** Due one week after the presentation you are evaluating.

**20% Final Take Home Exam**

## McMaster's Grading Scale

90-100	85-89	80-84	77-79	73-76	70-72	67-69	63-66	60-62	57-59	53-56	50-52	0-49
A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

The instructor reserves the right to adjust the final marks up or down, on an individual basis, in the light of special circumstances and/or the individual's overall performance in the course.

A note on dates and deadlines: The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with an explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email regularly during the term and to note any changes.

A note on class attendance: Because much of this class is based on discussion and presentations, is very hard to do well unless you attend all classes.