

**COURSE OUTLINE**  
**PSYCH4J03 INQUIRY IN PSYCHOLOGY – DEVELOPMENT**

**Instructor:** Dr. Terri Lewis                      PNB 110  
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**Course TAs:** Laura Gibson [gibsol@mcmaster.ca](mailto:gibsol@mcmaster.ca)  
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**Location:**    PC-335

**Time:**            Wednesdays 11:30–2:30

**Office hours:** By appointment

**Course Objectives.** Students will engage in self-directed research, critical thinking, and problem solving in the evaluation of existing research and the design of new research in the area of developmental psychology. Through assignments, students will gain experience with the basic principles of scientific research including the scientific method, experimental design, hypothesis testing, data analysis and interpretation, and reporting scientific findings. Students will strengthen their writing and oral presentation skills, their ability to evaluate the sources and content of information, their ability to engage in problem solving and critical thinking, and their ability to evaluate the work of their peers. In the first part of the course, we will evaluate the idea of critical or sensitive periods in development through critical evaluation of 8 papers from a special issue on critical periods in *Developmental Psychobiology* (2005), Volume 46. In the second part of the course students will work in groups to develop a grant proposal that addresses an important question of their choice in this domain.

**Course Schedule** (subject to revision)

All readings are from *Developmental Psychobiology*, 46, 2005. They are available for download from the course website, which can be accessed from the Psychology, Neuroscience & Behaviour Department webpage ([www.science.mcmaster.ca/psychology/undergraduate.html](http://www.science.mcmaster.ca/psychology/undergraduate.html)).

**January 6: Introduction to inquiry and sensitive periods in development**

**January 13: Sensitive periods in low-level vision**

Lewis, T.L. & Maurer, D. Multiple sensitive periods in human visual development: Evidence from visually deprived children.

Murphy, K.M., Beston, B.R., Boley, P.M., & Jones, D. G. Development of human visual cortex: A balance between excitatory and inhibitory plasticity mechanisms.

**January 20: Effects of brain lesions and visual deprivation**

De Schonen, S., Mancini, J., Camps, R., Maes, E., & Laurent, A. Early brain lesions and face-processing development.

Sathian, K. Visual cortical activity during tactile perception in the sighted and the visually deprived.

**January 27: Language and music**

Werker, J.F., & Tees, R.C. Speech perception as a window for understanding plasticity and commitment in language systems of the brain.

Trainor, L.J. Are there critical periods for musical development?

**February 3: Plasticity: Cochlear implants and learning in adults with amblyopia**

Harrison, R.V., Gordon, K.A., Mount, R.J. Is there a critical period for cochlear implantation in congenitally deaf children? Analyses of hearing and speech perception performance after implantation.

Levi, D.M. Perceptual learning in adults with amblyopia: A reevaluation of critical periods in human vision.

**February 10: Presentation work time**

**February 24: Presentation work time**

**March 3: Presentation work time**

**March 10: Presentations**

**March 17: Presentations**

**March 24: Presentations**

**March 31: Wrap up**

**Academic Integrity Policy Reminder**

See the Academic Integrity Policy, specifically Appendix 3, located at

[http://www.mcmaster.ca/senate/academic/ac\\_integrity.htm](http://www.mcmaster.ca/senate/academic/ac_integrity.htm)

Any student who infringes one of these resolutions will be treated according to the published policy. Any instance of Plagiarism will be dealt with in the most severe terms allowable by the Senate Policy on such matters.

### Evaluation and Due Dates

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

- 25% Attendance and participation.** Note that for high marks, comments and questions must make an intellectual contribution.
- 15% Sensitive Period Evaluation.** Due January 13, 20, 27 or February 3, depending on the topic.
- 5% Progress Report on Grant Proposal.** Due February 24.
- 20% Written Grant Proposal.** Due the Friday before your oral presentation.
- 20% Oral Presentation of Grant Proposal.** One of March 10, 17 or 24 (assigned in class).
- 15% Peer Evaluation of Grant Proposal.** Due March 31.

### 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. All written work will be evaluated on content, grammar/spelling, clarity of writing, presentation, and organization.