

PNB 4JO3 Inquiry in Psychology, Neuroscience & Behaviour

Topic: SCIENCE OUTREACH

COURSE SYLLABUS: Fall 2016

Instructor: Dr. Sigal Balshine, email: sigal@mcmaster.ca

Course TAs: Jessica Miller, email: millej16@mcmaster.ca

Carling Baxter, email: baxtercm@mcmaster.ca

When: Mondays 11:30-2:30

Where: Psychology Building Room 204

Office Hours: Mondays 2:30-3:30 (Sigal Balshine)

Mondays 10:30-11:30 (Jessica Miller)

Wednesdays 2:30-3:30 (Carling Baxter)

Overview: PNB 4J03 is an upper level Faculty of Science course dealing with broad topics within the fields of Psychology, Neuroscience & Behaviour. In this course we will study and evaluate the various approaches to “Science Outreach”. The science behind “Science Outreach” or the act of promoting public awareness and understanding of science, will be studied in depth using four different approaches. First, we will explore the attitudes, behaviours and opinions towards science held by the general public and evaluate how non-scientists typically choose to make use of scientific knowledge. We will tackle this issue by examining a number of controversial but particularly well-documented case studies in behavioural ecology. Second, we will learn best practices for the communication of scientific ideas and create materials that could be displayed on television, radio, print media or social media. Third, we will learn how to distill and produce science outreach materials that could be used for different ages in a science museum, zoo, botanical park, aquaria or planetaria. Fourth, in small groups we will construct a citizen science project that will both motivate and provide methodology so that public can get involved in research, monitoring, collecting and classifying data. This 4th year course is aimed at developing practical, transferable research and communication skills. Students will gain tools that can be used to more rationally inform the public about science planning, management, funding and policy.

Website: Avenue to Learn: Please check often for announcements

Students should be aware that they will be providing feedback and evaluations or other students. Be honest in your assessment of material but always provide only constructive comments.

Tentative Course Schedule:

Assigned readings will be available as *.pdf* files on the class webpage in Avenue. Lecture notes will also be found there, and will be available in the morning before the class.

Feedback on course-related materials will also be placed on the course web site hosted by Avenue to Learn.

Schedule

Week 1	September 12	Introduction: Course Outline What is Science Outreach? Examples of Science Outreach Scientific Disagreements
Week 2	September 19	Hike to Parking Lot M Communication Skills 1.
Week 3	September 26	What is Effective Science Outreach Lets Talk Science Skype Guest Lecture Planning Learning Activities
Week 4	October 3	Practicum Day in MacForest Improving the Tall Prairie Grass Garden in the front
Week 5	October 10	Thanksgiving Midterm Recess
Week 6	October 17	First Class Presentations (Learning Activities)
Week 7	October 24	What is Citizen Science? Team Project Choices
Week 8	October 31	In Class Team Work: led by Carling Baxter & Jess Miller
Week 9	November 7	Monitoring, Data Collection and Classification, Analyses
Week 10	November 14	In Class/Field Team Work
Week 11	November 21	In Class/Field Team Work
Week 12	November 28	Communication Skills 2.
Week13	December 5	Second Class Presentations and Pizza

Note: If it makes sense to modify the schedule the instructor reserves the right to modify elements of the course and will notify students accordingly (in class or by posting changes on the course website). 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 (like snowstorms). If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their emails and course websites weekly during the term and to note any changes.

Assignments and Assessment: There will be several assignments; some will involve just written work and some will involve both a written and an oral component. Some of these assignments will be individually based and others will be based on group work in a group project. These assignments and rubrics will be laid out in detail in documents in Avenue. Marks will be given for things like: application of the concept, clarity of the message, demonstration of understanding of the scientific issues, creativity and communication

success. Use of different media is encouraged. Written assignments must be submitted to the appropriate Avenue dropbox folder before the beginning of class on the due date. Late work will not be accepted. Always keep a dated copy of your work for your records.

Self and Group Mandatory Evaluations: Forms for self and group (peer) evaluations will be provided. These evaluations will document contributions, be based on a zero sum game and are confidential and should not be shared with other group members. The evaluations are a way to ensure that everyone is contributing to the group project and that feedback can be provided to all group members. These evaluations will be considered when final grades are determined.

Assignments and Evaluation

Assignment	Date Due	Mark	Grade based on:
Synopsis of a Scientific Controversy (Written)	September 19 th	2.5%	Individual performance
Lay Description of a Scientific Study (Written)	September 26 th	2.5%	Individual performance
Presenting Science Concepts to Kids (Written)	October 3 rd	5%	Individual performance
Learning Activity (Written)	October 17 rd	15%	Group and Individual Performance
Learning Activity (Oral)	October 17 th	15%	Group and Individual Performance
Science Outreach Project Presentations (Written & Oral)	December 5 th	40%	Group and Individual Performance
Participation	Throughout	20%	Attendance Class Participation Self and Peer Review/Evaluation

Your total score will be translated into a letter grade using the following general competency guide:

- A- Means you have attained a high level of competency in all areas of the subject matter. This level of competency would allow you to complete excellent projects in other areas of inquiry. This would be recognized by any instructor or your classmates.
- B- Means you have attained a high level of competency in most (but not all) areas of the subject matter, or you have attained a moderate level of competency in all areas. This level of competency would allow you to complete above average

work on projects in other areas of inquiry. You will be aware of some areas of weakness and you will have shown improvement in those areas and have even developed some strategies for minimizing or eliminating these issues.

C- Means you have attained a moderate level of competency in most (but not all) areas of the subject matter or you have attained a low level of competency in some areas. This level of competency means that you could complete average or satisfactory projects in other areas of inquiry. You will be able to recognize multiple areas where weaknesses remain and will have discussed a plan of action to deal with these concerns.

D- Means you have attained a low level of competency in all areas of the subject matter. This level of competency would allow you to complete below average projects in other areas of inquiry.

F- Means you have not attained competency in all the areas of the subject matter.

McMaster’s Grading Scale:

90-10	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

Policy Reminder: The instructor reserves the right to adjust final marks up or down, on an individual basis, in light of special circumstances and/or the student's total performance in the course. It is your responsibility to ensure that you have met all prerequisites listed in the McMaster calendar for this course. If you lack any prerequisites for this course, the Department may cancel your registration at any time.

Academic Integrity

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process.

Academic dishonesty is to misrepresent 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, at http://www.mcmaster.ca/senate/academic/ac_integrity.htm

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.
2. Improper collaboration in group work
3. Copying or using unauthorized aids in examinations