

PNB 4J03: Inquiry in Psychology, Neuroscience & Behaviour
COURSE SYLLABUS WINTER TERM JANUARY-APRIL 2016

Instructor: Dr. Judith Shedden Psychology, Neuroscience & Behaviour (PNB)
Email: judith.shedden@gmail.com

Course TAs:

Melissa Ptok Psychology, Neuroscience and Behaviour (PNB)
Email: ptokmj@mcmaster.ca

Swapna Krishnamoorthy Psychology, Neuroscience & Behaviour (PNB)
Email: krishs6@mcmaster.ca

Where/when: BSB/B155 Tuesday 11:30 am – 2:20 pm

Office Hours: The best way to contact us is via email or in person in class, we will respond quickly.

Overview: PNB 4J03 is an upper level Faculty of Science course dealing with the systematic investigation of broad topics within the field of Psychology, Neuroscience & Behaviour. Inquiry is a process of critical thinking. We will review the basic tenets and principles pertinent to conducting science: the scientific method, hypothesis testing, experimental design, data analysis and interpretation, and the reporting of scientific findings. Students will engage in self-directed research, critical thinking, and problem solving, and will gain experience in the evaluation of the sources and content of existing research. Students will strengthen their scientific writing and oral presentation skills by writing critiques of research articles, leading presentations and discussions, and developing, writing, presenting, and defending a research grant proposal. Students will gain experience with peer evaluation through critical evaluation of the logic, the scientific writing and oral presentations of their classmates.

What is Inquiry-based learning? If you have never taken an inquiry-based learning course before, you might want to read about it. A good place to start is: <http://cll.mcmaster.ca/resources/inquiry.html>. During our first class, we will ask you and the other students to talk about your expectations regarding inquiry-based learning, and you will take a major role in designing the course itself.

Web Site: Avenue to Learn (check often for announcements) and Google Drive
Students should be aware that, when they access the electronic components of this course, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with Prof Shedden.

Students should also be aware that they will be providing feedback and evaluations of other students (peer review). This is an integral part of the course. In doing this, your identity may be known to the other student even if names are removed from the written work. Be honest in your assessment of their material and provide constructive comments. The only way to improve your writing is to write often and have your writing read and critiqued by others. If you are uncomfortable with having other students read your writing, you should talk to Prof Shedden.

At certain points in the course it may make good sense to modify the schedule; the instructor reserves the right to modify elements of the course and will notify students accordingly.

Course Calendar (the schedule is tentative: students will contribute to the final design). We will work with this schedule on the first day of class, and shift some things around depending on number of students in the course, individual and group goals, etc. As part of the inquiry-based learning, students will take an active role in designing the schedule, rubrics, etc.

Jan 5	Course introduction. Students (you) lead discussion and workshops: Topics may include inquiry-based learning, professional development, scientific method, scientific reporting, anatomy of scientific paper, literature review, peer review, experimental design, hypothesis testing, statistics, ethics, grant and project proposals, writing an abstract, etc. Each week, please bring laptops for in-class on-line research.
Jan 12	Discussion and workshops continued. Groups lead discussions on topics started last week. Groups work on their research ideas and plan presentations.
Jan 19	Avenue discussion post due by 11:59 pm Jan 18 Groups present written and oral work and lead discussion. Submit peer reviews.
Jan 26	Avenue discussion post due by 11:59 pm Jan 25 Groups present written and oral work and lead discussion. Submit peer reviews.
Feb 2	Workshops (in class): Project preparation and writing
Feb 9	Workshops (in class): Project preparation and writing Project proposal presentation (first draft); peer review and feedback
Feb 16	<i>Reading Week</i>
Feb 23	Workshops (in class): Project preparation and writing Project proposal presentation (second draft); peer review and feedback
Mar 1	Workshops (in class): Project preparation and writing Project proposal presentation (first draft); peer review and feedback First set of self and group assessments due by 11:59 pm Mar 1
Mar 8	Workshops (in class): Project preparation and writing
Mar 15	Workshops (in class): Project preparation and writing
Mar 22	Workshops (in class): Project preparation and writing All groups submit written project proposal by 11:59 pm Mar 25 (this allows time for peer review and discussion preparation before next meeting)
Mar 29	Project proposal: Final oral presentations and discussion All students: Avenue discussion posts due 11:59 pm Mar 28
Apr 5	Project proposal: Final oral presentations and discussion All students: Avenue discussion posts due 11:59 pm Apr 4 Peer evaluation of proposals due by 11:59 pm Apr 5 Second set of self and group member assessments due by 11:59 pm Apr 5

Assignments: Assignments include written work, oral presentations, and peer review. These will be laid out in detail in documents on Avenue and/or our shared Google Drive. Written assignments should be submitted to the appropriate folder in our shared Google Drive. Late work will not be accepted. Always keep a dated copy of your work for your records.

Self and group assessments: Forms for self and group assessments can be found on Avenue; complete these electronically and upload to Avenue dropbox. Students will complete and upload these in the middle of the course and again at the end of the course; due dates can be found in the schedule above; the same forms are used for both due dates. These assessments are confidential and should not be shared with other group members. The assessments will be considered when final grades are determined.

Avenue discussion board posts: All students are expected to come prepared to contribute to all discussions that follow group oral presentations. Presenting groups will provide background reading (links posted on the discussion board on Avenue). The other students will post comments about the readings. These comments/observations must be posted on the Avenue discussion board before the end of the day prior to the presentation (i.e., before end of Monday). The observations you make are completely up to you. They should be unique (don't copy what another student writes), intellectually interesting (evaluate; use critical thinking), and brief (between 100 and 200 words). Note that I used 124 words to write this paragraph. Credit for these posts is part of the 25% participation grade.

Logistics & Grading. The following weights will be used to compute a total score for each student. During the first class, we will adjust these as necessary to accommodate any changes in course design. McMaster University reserves the right to change course dates, course assignments and their grading weights, and course deadlines in case of an emergency, labor disruption, civil unrest/disobedience, etc.

	Assignment	Grade based on
15%	Initial project ideas (written and oral presentations; peer review)	Group and individual performance; peer evaluations
5%	Project Proposal: First draft, Oral Presentation	Group and individual performance; peer evaluations
10%	Project Proposal: Second draft, Oral Presentation	Group and individual performance; peer evaluations
10%	Project Proposal: Third draft, Oral Presentation	Group and individual performance; peer evaluations
35%	Project Proposal (written and oral presentations; peer review)	Group and individual performance; peer evaluations
25%	Participation	Attendance; abstracts; weekly progress reports; class participation (in class and on Avenue discussion board); intellectual contribution to class and groups; self and group assessments, peer evaluations, instructor evaluations

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

A... has attained a high level of competency in all areas of the subject matter. This level of competency would allow the student to complete excellent projects in other areas of inquiry. This would be recognized by any instructor or member of the student's peer group.

B... has attained a high level of competency in most (but not all) areas of the subject matter, or has attained a moderate level of competency in all areas. This level of competency would allow the student to complete above average projects in other areas of inquiry. The student is aware of some areas of weakness, has shown improvement in those areas, and has developed strategies for minimizing or eliminating them.

C... has attained a moderate level of competency in most (but not all) areas of the subject matter, or has attained a low level of competency in some areas. This level of competency would allow the student to complete average (satisfactory) projects in other areas of inquiry. The student recognizes multiple areas of weakness, and has discussed a plan of action to deal with the concerns.

D... has attained a low level of competency in all areas of the subject matter. This level of competency would allow the student to complete below average projects in other areas of inquiry. This would be recognized by any instructor.

F... has attained no competency in all areas of the subject matter.

Academic Integrity:

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour 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 types of academic dishonesty please refer to the Academic Integrity Policy, located at <http://www.mcmaster.ca/academicintegrity>.

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 tests and examinations.