

Special Topics in Neuroscience, Psych 4F03

Instructor:

Deda Gillespie, PhD

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All class-related email must include "PNB 4F03" in the subject line.

Responses will normally be made within 48 hours.

Office Hours: by appointment (email to schedule)

Teaching Assistant:

Alan Cooper

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Office Hours: during tutorial or by appointment (email to schedule)

Course description:

An advanced seminar focusing on selected topics in neuroscience. Topics for discussion selected in consultation with students and instructor, with focus on animal models of neurobiological processes.

Course objectives:

The primary goal of this course is to help students think deeply about neurobiology. More generally, the course is designed to help students develop intellectual independence through:

- 1) critical and creative thinking skills
- 2) written and oral communication skills
- 3) collaborative skills

Students will practice these skills by reading and discussing articles from the primary research literature and by designing research projects in small teams.

Course logistics:

Lectures: Mondays 9:30-11:20; Wednesdays 10:30-11:20 in BSB 238A.

Tutorials: Thursdays 10:30-11:20 in BSB 238

NOTE: Nov 22 and Nov 29 will be required tutorial sessions.

Required readings:

Required textbook: From Neuron to Brain (4th ed.); Nicholls et al.

Additional required readings will be posted on the course website. Students are expected to read all guides posted on the website, assigned passages from the textbook, any papers assigned and discussed in class, and any papers they present or review. Students will need at least to skim all grant proposals and will critically read 3 proposals. Discussion papers and proposals will be available online in pdf format one week before they are discussed in class.

Important dates:

Sep 24	Proposed grant topics due, 5:00pm
Oct 15	Draft specific aims due, 5:00pm
Oct 24	Midterm examination
Oct 29	Last day to consult instructor on paper choice for Presentation 1 Draft outline due, 5:00pm
Nov 7	Draft summary due, 5:00pm
Nov 19	grant proposal due
Dec 1	mock study section meeting

There will be no final examination.

Presentations:

Each team will have the opportunity to make two presentations. In the first, teams will present papers relevant to their grant proposals. Teams must consult the instructor to choose an appropriate paper by October 29. In their second presentations, teams will present and defend their grant proposals.

Written assignments:

1) Papers: Students will submit brief written assignments (1-3 paragraphs) related to the papers discussed in class Sep 15-Nov 12. Assignments will be evaluated for content and mechanics. The 2 lowest scores will be dropped.

2) Grants: Each student will be assigned 3 grant proposals to review. Grant reviews are due at 9:30am on the date of the grant presentation. Students may opt to review at most one additional grant, in which case the lowest score will be dropped.

Assignments may be submitted as paper copies or by email as electronic documents. Emailed assignments must be in pdf format and must be emailed to both the instructor and the TA. All written assignments are due at 9:30am on the date of discussion; late submissions will be discounted one full letter grade for each day--or portion thereof--late. Any submitted work that is found to contain plagiarized portions will be assigned a grade of zero and a written report will be submitted to the Office of Academic Integrity.

Grant Proposal:

Students will collaborate in small teams to develop grant proposals on topics chosen in consultation with the instructor. Each team will present a background paper to the class, write a grant proposal, and present and defend the proposal. On the final day of the course, students will discuss the grant proposals collectively and will decide which grants to fund. Scores given by other students in the class will be factored in to the grant proposal's final score. Each team is required to schedule one meeting with the instructor to discuss the grant proposal. Grant proposals not received by the posted deadline will receive scores of zero.

Participation:

Students should take an active part in discussions and in-class exercises. Quality and relevance of contributions to the discussion will be rated more highly than overall time speaking. Students should expect to present a figure or to discuss background or conclusions for an assigned paper, and to participate in exercises led by other students. Students may also be asked to provide brief feedback to the teams that are presenting. Students who exhibit disruptive behaviour (including habitual tardiness) will receive lower participation marks.

Exercises:

These independent or small-group exercises are designed to help students think critically and creatively about science. Students will be graded on participation or in-class written response.

Midterm exam:

The short-answer style midterm exam will be based on the lectures and required readings. A review session will be given before the exam date.

Team work vs independent work:

Students are expected to develop and write all reviews of papers and grants independently. Inappropriate group work will be treated as a case of academic dishonesty; the review will be marked 'zero,' and a written report will be submitted to the Office of Academic Integrity.

Students will work in teams to select and present papers and to develop and write grant proposals. Each team member will receive the same score unless evidence suggests a different, more equitable, distribution of individual scores. All team work must include a statement of contributions. Additionally, each member of the team will be required to submit evaluations of their own and other team members' work.

Evaluation:

participation/exercises	25%	independent/team
midterm exam	15%	independent
presentations	15%	team/independent
written assignments	20%	independent
grant proposal	25%	team

Final grades will be altered only in the event of an incorrect calculation.

Missed work:

Students who miss an assignment or presentation due to illness or personal reasons must petition the appropriate Associate Dean for relief within one week of the date of missed work. Students who have successfully petitioned for relief will be given reasonable opportunities to make up missed work. Any student forced to miss work should make every effort to fulfill team responsibilities as early as possible. Faculty of Science students should consult "[Policy for Absence from School Due to Illness or Compassionate Reasons](#)" regarding petitions for relief.

Academic Integrity: (McMaster approved language)

"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."

Notes:

The instructor reserves the right to alter the published schedule depending on special circumstances that may arise. Any such changes will be announced in class and posted on the course website. It is each student's responsibility to check the course website regularly for updates: <http://psych.mcmaster.ca/4F03/4F03web.html>

No one may record any part of the class without prior consent of all individuals present.