Instructor: Dr. Bruce Milliken (millike@mcmaster.ca)
Office: PC 103
Phone: 905-525-9140 x27828
Office Hours: By appointment

Course Co-ordinator: Sally Presutti
E-mail: pthesis@mcmaster.ca
Phone: 905-525-9140 x23026
Office: PC 102

Instructional Assistant: Dr. Ellen MacLellan
E-mail: maclele@mcmaster.ca
Phone: 905-525-9140 x24824
Office: PC 148

Associate Chair (Undergraduate): Dr. Nick Bock
E-mail: bockn@mcmaster.ca
Phone: 905-525-9140 x21147
Office: PC 304

Classes: Tuesday 2:30-4:20, PC 155
This class time is reserved for us, but we will meet as a group only as needed. A schedule of meeting times is provided in Appendix 1 (see below).

Text: There is no textbook assigned for this course.

Avenue to Learn (http://avenue.mcmaster.ca): All course materials will be made available on an Avenue to Learn site. You will also be asked to submit occasional materials to the Avenue site.

Course Objectives. The broad objective of this course is to provide students an opportunity to pursue a research project under the supervision of an experienced researcher. This broad objective encompasses a wide array of learning opportunities for students in the following areas: conceptual understanding, research design, stimulus and task construction, data collection, data analysis and interpretation, and science communication (both oral and written). Across the thesis course, students will have learning opportunities in many or all of these areas.

Evaluation: The thesis evaluation has three components: (1) thesis mid-term grade (10%); (2) thesis poster grade (10%), thesis end-of-term grade (80% or 90%, depending on whether you complete a thesis poster). A finer breakdown of the weightings of activities that comprise the mid-term and end-of-term grades will be provided to you by your supervisor. Note that students in PNB 4D09 will be required to present a poster of their research at our Annual PNB Thesis Poster Session, to be held on March 31 2020, whereas this is an optional requirement for students in PNB 4D06 and PNB 4DD6.
PNB 4D09 – Summary of Evaluation
Thesis mid-term grade 10%
Thesis poster grade 10%
Thesis end-of-term grade 80%
Total 100%

PNB 4D06/4DD6 – Summary of Evaluation
Thesis mid-term grade 10%
Thesis poster grade 10%
Thesis end-of-term grade 80% or 90% (if poster not presented)
Total 100%

Assigning of Final Grades: Initially, all assigned grades will be numerical. Final letter grades will be assigned based on the table below.

<table>
<thead>
<tr>
<th>Numerical Grade</th>
<th>Letter Grade</th>
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</thead>
<tbody>
<tr>
<td>90 – 100</td>
<td>A+</td>
</tr>
<tr>
<td>85 – 89</td>
<td>A</td>
</tr>
<tr>
<td>80 – 84</td>
<td>A-</td>
</tr>
<tr>
<td>77 – 79</td>
<td>B+</td>
</tr>
<tr>
<td>73 – 76</td>
<td>B</td>
</tr>
<tr>
<td>70 – 72</td>
<td>B-</td>
</tr>
<tr>
<td>67 – 69</td>
<td>C+</td>
</tr>
<tr>
<td>63 – 66</td>
<td>C</td>
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<tr>
<td>60 – 62</td>
<td>C-</td>
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<tr>
<td>57 – 59</td>
<td>D+</td>
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<tr>
<td>53 – 56</td>
<td>D</td>
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<tr>
<td>50 – 52</td>
<td>D-</td>
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<tr>
<td>0 – 49</td>
<td>F</td>
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</table>

Special Needs: As with other courses, if you require any form of accommodation, you should request that accommodation through Student Accessibility Services (SAS). Please note that documentation regarding your accommodation will be sent to the course instructor rather than your supervisor, so it is important that you discuss the requested accommodations with your supervisor. If you encounter any difficulties with accommodations, please bring your concern to the course instructor, who will then be able to consult with your supervisor.
Assignment Descriptions:

(1) **Expectations Agreement** – This document allows you and your supervisor to set expectations for your performance in the thesis course. It also identifies how meeting those expectations will be weighted in the end-of-term grade that you receive in April (worth 80% or 90% of your overall grade). It will also identify any key timelines that must be met. This assignment is to be signed by both supervisor and student, and submitted to the Avenue to Learn site by October 1, 2019.

(2) **Short Research Proposal** – This assignment requires you to write a short research proposal (300 words maximum) that describes briefly the following components of your proposed study: (a) conceptual background; (b) research objective(s); (c) methodology to be used; (d) anticipated results; and (e) implications of anticipated results. At the end of this document, please add two additional sections: (1) an explicit statement of your research question (two sentences maximum); and (2) Citations for two research articles that are focal to your proposed study. This assignment is to be signed by both supervisor and student, and submitted to the Avenue to Learn site by November 1, 2019.

(3) **Mid-course evaluation** – This document summarizes the evaluation by your supervisor of your performance in the thesis course for the fall term. Note that it is a summary grade that will not be broken down into components, but that will be accompanied by any feedback that the supervisor deems useful to the student looking forward to the winter term. This evaluation will count for 10% of the overall thesis course grade. This document is to be signed by by both supervisor and student, and submitted to the Avenue to Learn site by December 19, 2019.

(4) **Revised Expectations Agreement** – This document is a revision of the expectations agreement completed in the fall term. It allows you and your supervisor to re-align expectations and timelines, if necessary, early in the winter term. This document is to be signed by both student and supervisor and submitted to the Avenue to Learn site by January 31, 2020.

(5) **Poster Abstract** – This is an abstract that will be used to organize the Annual PNB Thesis Poster Session. This document is to be submitted to the Avenue to Learn site by March 10, 2020.

(6) **Poster Presentation** – All students in PNB 4D09 are required to present a poster at the Annual PNB Thesis Poster Session on March 31, 2020. A passing grade for the thesis course will not be entered if a poster is not presented. Presentation of a poster at a time other than the Poster Session itself will occur only in extreme circumstances, and must be arranged with the course instructor and co-ordinator well prior to the day of the Annual PNB Thesis Poster Session. Failure to make such arrangements before the date of the Poster Session will result in a penalty of one letter grade (i.e., an A becomes a B, a B becomes a C, and so on) on the mark for the poster presentation. Presenting a poster is an optional course component for students in PNB 4D06 and PNB 4DD6.

(7) **Thesis Submission** – The final copy of the thesis must be e-mailed, in one PDF file, to pthesis@mcmaster.ca and to your supervisor no later than Tuesday April 14, 2020. If the
thesis is not received by this deadline, a grade of F will be recorded for 4D09, 4D06, or 4DD6. Extensions of the deadline are rarely granted. If the supervisor thinks an extension is warranted, they can request that the student obtain a “Request for Incomplete” form from the course co-ordinator. This form is to be completed and signed by the student, the supervisor, and the Chair of the Department of Psychology, Neuroscience & Behaviour. This form must then be submitted to the course co-ordinator (Sally) in PC 102. It will then be submitted for approval to the Associate Dean of the student’s Faculty, and the student will be advised by e-mail if the request has been approved. This process must not be left to the last minute. Please be advised that a grade of Incomplete on the thesis will likely delay graduation.

Assignment Summary:

<table>
<thead>
<tr>
<th>Assignment Name</th>
<th>Due Date</th>
<th>Grade Weighting</th>
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<tbody>
<tr>
<td>Expectations Agreement</td>
<td>October 1, 2019</td>
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<tr>
<td>Short Research Proposal</td>
<td>November 1, 2019</td>
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<tr>
<td>Mid-Course Evaluation</td>
<td>December 19, 2019</td>
<td>10%</td>
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<tr>
<td>Revised Expectations Agreement</td>
<td>January 31, 2020</td>
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</tr>
<tr>
<td>Poster Abstract</td>
<td>March 10, 2020</td>
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<tr>
<td>Poster Presentation</td>
<td>March 31, 2020</td>
<td>10%</td>
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<tr>
<td>Written Thesis</td>
<td>April 14, 2020</td>
<td>80% or 90%</td>
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Note 1 – Course Changes: The instructor and university reserve the right to modify elements of the course, and the course outline, 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 students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

Note 2 – Academic and Research Integrity: Also, attention is drawn to the Academic Integrity and Research Integrity Policies. Students who infringe on the resolutions of either of these policies will be treated according to the appropriate published policy.

Note 3 – Work Schedules: For many students, especially those conducting research off-campus, required work schedules may not correspond to the McMaster sessional dates and vacation schedules. For example, you may be scheduled to work on a component of your thesis project over the fall or winter mid-term recess week. Your supervisor is allowed to require this of you. If you wish to have specific time off, it is recommended that you negotiate this with your supervisor as soon as possible, but with the knowledge that it may not be possible.

Note 4 – Research in Hospital Settings: Hospitals have their own requirements, many of which must be completed before research begins. For example, the requirements for doing research at Hamilton Health Sciences include: (a) immunization clearance; (b) police clearance for placements with the McMaster Children’s Hospital at Chedoke; (c) signed confidentiality agreement; (d) signed learner undertaking and agreement form (expectations for the placement); (e) completion of WHMIS learning package and quiz; (f) completion of fire learning package and quiz; (g) completion of Student Orientation Handbook. If documentation of completion of ALL of these requirements has not been received by the time the final grades are due, then the student will receive a grade of “Incomplete” until these requirements are completed.
This is a preliminary schedule of our classes for the fall and winter term. This schedule is likely to change in response to perceived need for class instruction. If you can think of a topic on which you would like some instruction, please communicate your idea to the course instructor. If there is enough interest, we will book a class on that topic. There is no penalty for missing classes. However, students are responsible for monitoring the Avenue to Learn site to stay up-to-date on organizational aspects of the course. If a class is missed that delivered content of importance, students are asked to consult the Avenue site and other colleagues in the course to catch up on that content, before contacting the instructor, course co-ordinator, or instructional assistant.

**FALL SCHEDULE**

<table>
<thead>
<tr>
<th>Week of …</th>
<th>Topic</th>
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<tbody>
<tr>
<td>September 3</td>
<td>Course Overview</td>
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<tr>
<td>September 10</td>
<td>Ethics/Research Integrity</td>
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<tr>
<td>September 17</td>
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<tr>
<td>September 24</td>
<td>Graduate Studies Info</td>
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<tr>
<td>October 1</td>
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<td>October 8</td>
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<td>October 15</td>
<td>Mid-term Recess</td>
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<td>December 3</td>
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**WINTER SCHEDULE**

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<tr>
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<td>January 7</td>
<td>Welcome Back</td>
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<td>February 11</td>
<td>Tips for Making Posters</td>
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<td>February 18</td>
<td>Mid-Term Recess</td>
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<td>February 25</td>
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<tr>
<td>March 3</td>
<td>Annual PNB Thesis Poster Session</td>
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<td>March 10</td>
<td>Wrap-Up</td>
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<td>March 17</td>
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<td>March 24</td>
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<td>March 31</td>
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<td>April 7</td>
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