

**UNDERGRADUATE THESIS**  
**IN PSYCHOLOGY (PSYD98) OR NEUROSCIENCE (NROD98)**

**(Rm BV361)**

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**OBJECTIVES**

The purpose of this course is to provide students pursuing a specialist degree in Psychology or Neuroscience with an intensive research apprenticeship in their discipline. In the process of collaborating with a faculty advisor, students will develop the skills necessary to conduct and present research. These skills include library research, designing experiments, collecting and analyzing data, interpreting results, writing, and public speaking.

**COMPONENTS OF EVALUATION**

The overall breakdown of your evaluation for the course is:

Supervisor grade	60%
Second reader grade	15%
Class grade	25%

The breakdown of your evaluation for the class component is:

1. Attendance and participation in scheduled meetings	10%
2. Ethics requirement	10%
3. Oral presentation	35%
4. peerScholar assignments	15%
5. Poster presentation	30%

***1. Attendance/participation***

The class will not meet every week during the year. For scheduled classes, however, attendance is mandatory (except where indicated). Attendance will be taken at each meeting, and information about your contributions to the class will be made available to your supervisors. The opportunity the class time affords students to develop public speaking skills and to engage in discussion about research with peers is an important part of the overall research experience. Students must attend at least 50% of classes in order

to receive any of this portion of the grade; students will earn part or all of the grade, depending on how many classes they attend in excess of 50%, and their level of participation in all classes they attend.

## **2. Oral Presentation**

Students will give a 20-min oral presentation of their thesis project, followed by a 5 min discussion period. Presentations should include a well-developed background of current literature in the relevant research area that provides a sound rationale for the research question under study. A clear statement of the research question and hypothesis should be provided, as well as detailed description of the methodology, research design, and data analysis techniques. It will be acceptable to present preliminary or complete results, depending on what stage you are at in the data collection process at the time of your presentation. In all cases, a discussion and interpretation of anticipated or obtained results, within the context of the published literature, should be provided.

Tips on giving effective oral presentations will be provided in class on Jan 30.

## **3. Ethics**

All research in the University that involves living animals, human or non-human, must be approved by the appropriate ethics review board before the research can begin. There are 3 components to the ethics assignment for this course, and all students, regardless of whether they are doing human or animal research, are expected to complete each component:

1. *Meeting and understanding ethics requirements for your project.* All students must consult with their supervisor first thing in the term to determine what review procedures have been followed for their projects and whether additional review proceedings are required before the work can be carried out. Some students will need to submit an “Undergraduate Ethics Review Protocol for Self-Initiated Projections” for internal review. The protocol form is available at <http://www.utsc.utoronto.ca/~psych/undergraduates.html>. Please speak with me, Hanan Kayyali, or your supervisor about the procedures for submitting these protocols for review. Ultimately, it is the responsibility of your supervisor to ensure that your projects have met the necessary ethics review requirements; however, it is an important part of your education to know and understand what those requirements are. For this reason, you are asked to have a conversation with your supervisor about the ethics requirement for your particular project as early in the term as possible.

2. *Completing Introductory Tutorial for the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2).* All students are required to complete this tutorial online (<http://www.pre.ethics.gc.ca/eng/education/tutorial-didacticiel/>) by Oct. 25, and obtain a certificate of completion to submit to Prof Erb on Oct. 3.

3. *Attending presentation on Ethics in Animal Research.* This presentation will be give by Dr. David Hanwell, our university veterinarian, in class on Oct. 3.

#### ***4. peerScholar Assignments***

This assignment will simulate the peer review process. Students will submit a complete draft of the introductions to their theses to peerScholar by Jan 16. Subsequently, each student will be assigned 2 draft introductions of their peers to read and review. Reviews will be submitted to peerScholar by Jan 30. Students will then revise their own work, based on the reviews of their peers, and write a letter indicating how they responded to each of their peers' comments. These revisions and letters will be posted to peerScholar by Feb 6. This is the process followed in the review of a manuscript to a peer review journal.

#### ***5. Poster Presentation***

Students will present posters of their projects during a thesis day on April 9. This is a great opportunity to present your final work and receive feedback from professors and peers. More details about what should be included in the content of the posters, and the structure of the poster session, will be provided later in the term.

### **BLACKBOARD PORTAL**

The U of T Blackboard Courseware Portal will be used in this course to post announcements and any relevant course materials. To access your course website, or any other Blackboard- based course website, go to the U of T portal login page at <http://portal.utoronto.ca> and login using your UTORid and Password. Once you have logged in to the portal using your UTORid and Password, you'll find the link to your course website along with the link to all your other Blackboard-based courses.

### **FINAL THESIS SUBMISSION**

Students are required to submit 2 copies of their final thesis by **Mon April 6 at 5 pm**. Late submissions will be subject to a penalty of 5% per day. [Details on where to make submissions will be provided at a later date.](#)

### **ASSIGNMENT DEADLINES**

<b>Oct 3</b>	Certificates of completion for tri-council on-line ethics tutorial (to be submitted in class)
<b>Jan 16</b>	Draft introductions posted to peerScholar
<b>Jan 30</b>	Peer reviews of introductions posted to peerScholar
<b>Feb 6</b>	Revised drafts and letters of changes posted to peerScholar
<b>Mar 28</b>	Full draft of thesis posted to peerScholar (optional)

**Apr 2**

Peer reviews of draft theses posted to peerScholar (mandatory for those submitting a draft on Mar 28)

**Apr 6**

Theses due by 5 pm (instructions for submission forthcoming)

## SCHEDULE OF CLASS MEETINGS

<b>DATE:</b>	<b>TOPICS:</b>
Sept 5	No class scheduled
Sept 12	<b>Introductions and overview</b>
Sept 19	<b>Applying to Graduate School (attendance optional)</b>
Sept 26	<b>Ethics in Science and the peer review process</b>
Oct 3	<b>Ethics in Animal Research</b>
Oct 10	No class scheduled
Oct 17	READING WEEK
Oct 24	<b>Writing Workshop</b>
Oct 31	No class scheduled
Nov 7	No class scheduled
Nov 14	<b>peerScholar assignment</b>
Nov 21	No class scheduled
Nov28	No class scheduled

....*WINTER BREAK*.....

Jan 9	No class scheduled
Jan 16	<b>Applying for graduate fellowships (attendance optional)</b>
Jan 23	No class scheduled
Jan 30	<b>Tips on giving oral presentations</b>
Feb 6	No class scheduled

<b>Feb 13</b>	No class scheduled
<b>Feb 20</b>	READING WEEK
<b>Feb 27</b>	<b>Poster workshop</b>
<b>Mar 6</b>	No class scheduled
<b>Mar 14</b>	No class scheduled
<b>Mar 13</b>	<b>Oral presentations</b>
<b>Mar 20</b>	<b>Oral presentations</b>
<b>Mar 27</b>	<b>Oral presentations</b>
<b>Apr 6</b>	<b>Theses due by 5:00 pm</b>
<b>Apr 9</b>	<b>Poster Day</b>