

UNDERGRADUATE THESIS

IN PSYCHOLOGY (PSYD98) OR NEUROSCIENCE (NROD98)

(Rm BV361)

Instructor: David Haley

Course meetings: Fridays, 1PM to 3PM

Office: SW-564; *Office hours:* Friday 4PM to 5PM

E-mail: haley@utsc.utoronto.ca

COURSE DESCRIPTION

This course offers the opportunity to engage in a year long research project under the supervision of an interested member of the faculty in Psychology. The project will culminate in a written report in the form of a thesis and a poster presentation. During the course of the year, at appropriate times, students will meet to present their own research proposals, to appraise the proposals of others, and to discuss the results of their investigation. Students must first find a supervisor, which is usually confirmed before the start of the academic term in which the project will be initiated. Students will meet as a group with the coordinator as well as individually with their supervisor. This course is restricted to Specialists in Psychology, Mental Health Studies, and Neuroscience with a cumulative GPA of 3.3 or higher. Students planning to pursue graduate studies are especially encouraged to enroll in the course. Students must obtain a permission form from the Psychology departmental website (www.utsc.utoronto.ca/psych/undergraduates) that is to be completed and signed by the intended supervisor, and submitted to the Psychology Office. At that time, the student will be provided with an outline of the schedule and general requirements for the course. Students seeking supervision off campus will need to arrange co-supervision with a faculty member in Psychology at this campus.

OBJECTIVES

The purpose of this course is to provide students pursuing a specialist degree in Psychology, Mental Health Studies, and 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. Finally, this course will create opportunities to critically reflect on science and scientific conduct.

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 I	5%
4. Oral presentation II	30%
5. peerScholar assignments	10%
6. Poster presentation	35%

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. For some of the classes, readings will be provided in advance (e.g., Reflecting on Science)

2. Oral Presentation I

Students will give a 3-min oral presentation of their thesis project, followed by a 2 min discussion period. Presentations are intended to provide a concise and rapid transmission of information concerning thesis topic and rationale. Material covered should address the following questions: What is the question, what is known about the question, what remains to be shown, what is the hypothesis, and how will the hypothesis be tested.

Tips on creating/delivering successful 3-min oral presentations will be provided on Oct 23.

2. Oral Presentation II

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.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. 30, and obtain a certificate of completion to submit in person to David Haley on Oct. 30.

3. *Attending presentation on Ethics in Animal Research.* This presentation will be given by Dr. David Hanwell, our university veterinarian, in class on Oct. 30.

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 5 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

Oct 30	Certificates of completion for tri-council on-line ethics tutorial (to be submitted in class)
Feb 5	Draft introductions posted to peerScholar
Feb 12	Peer reviews of introductions posted to peerScholar
Feb 26	Revised drafts and letters of changes posted to peerScholar
Mar 28	Full draft of thesis posted to peerScholar (optional)
Apr 1	Peer reviews of draft theses posted to peerScholar (mandatory for those submitting a draft on Mar 28)
Apr 5	Theses due by 5 pm (instructions for submission forthcoming)

SCHEDULE OF CLASS MEETINGS

DATE:	TOPICS:
Sept 4	No class scheduled
Sept 11	No class scheduled
Sept 18	Introductions and overview
Sept 25	No class scheduled
Oct 2	Applying for Graduate School
Oct 9	No class scheduled
Oct 16	READING WEEK
Oct 23	No class scheduled
Oct 30	Ethics in Science and the peer review process/ Ethics in Animal Research
Nov 6	No class scheduled
Nov 13	Oral presentations I
Nov 20	Oral presentations I
Nov 27	Writing Workshop
<i>....WINTER BREAK.....</i>	
Jan 8	PeerScholar Assignment - Primer Tips on giving oral presentations
Jan 15	No class scheduled
Jan 22	No class scheduled
Jan 29	Writing Workshop II - thesis development
Feb 5	No class scheduled

Feb 12	No class scheduled
Feb 19	READING WEEK
Feb 26	Poster workshop
Mar 4	No class scheduled
Mar 12	Oral presentations II
Mar 19	Oral presentations II
Mar 26	Oral presentations II
Apr 5	Theses due by 5:00 pm
Apr 8	Poster Day