

PSY400Y: THESIS
University of Toronto
2014-2015

Instructor: Professor Alison Chasteen
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Meeting Time and Location: Thursdays 2-5 P.M., Sidney Smith 581

Course Objectives: The purpose of this course is to provide each student with an intensive apprenticeship in psychological research. In the process of collaborating with faculty, students are expected to acquire (or sharpen) the skills required for conducting and presenting research. These skills include library research, writing, public speaking, designing experiments, and collecting, analyzing, and interpreting data. These skills can be useful tools for life, regardless of your career path. This course is open only to 4th year students enrolled in the Psychology Undergraduate Research Specialist Program who have already completed PSY 309. Students enrolled in PSY400 are expected also to take PSY 409 taught by Prof. Helwig.

Psy400 will not meet every week during either term. In the fall term we will meet every week until we feel that it is time to take a break and return next term. In the winter term we will meet twice at the beginning of the term. Then, we will take a break and we will meet again at the end for students to present their research and discuss it.

There are several components to the course. The major requirement is the written thesis. In addition, students will prepare a written proposal for the thesis, present this proposal in class, present preliminary data in class, present their thesis results in class, and generally participate in class discussions.

Course Communications: Email is the best way to reach me. You should use your UTORmail email account (see www.utorid.utoronto.ca), as that is the account I will be sending course communications to via Blackboard.

Note that all communications (verbal, email, discussion board, etc.) should be respectful in language and tone and constructive in nature. This includes communications with me and with your fellow students.

Course Website: Blackboard portal

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.

Course Schedule

Date	Topic
Thurs. Sept. 11	Welcome and Overview
Thurs. Sept. 18	Ethics in Science (see list of readings). PSY 100 Subject Pool Info – Jessica Robin @ 2:00
Thurs. Sept. 25	How to get into grad school. CONTRACT DUE
Thurs. Oct. 2	Presentations – Thesis Proposals
Thurs. Oct. 9	Presentations – Thesis Proposals
Thurs. Oct. 16	Presentations – Thesis Proposals (if needed)
Friday Oct. 17	PROPOSAL DUE
2015	
Thurs. Jan. 15	Data Blitz
Thurs. Jan. 22	Data Blitz
Thurs. March 5	Presentations – Results
Thurs. March 12	Presentations – Results
Thurs. March 19	Presentations – Results (if needed)
Thurs. March 26	U of T – Poster Day
Thurs. April 2	THESIS DUE

Readings for Sept. 18th

- On being a scientist: responsible conduct in research. National Academy Press, Washington, DC <http://www.nap.edu/readingroom/books/obas/>
- Bloom FE (2000). Unseemly Competition. *Science*, 287, 589
- Additional recommended reading: Santiago Ramon y Cajal. Advice for a young investigator. The MIT Press

Grading Scheme

Assignment:	Weight
Written proposal (supervisor 5%; PSY400 instructor 5%)	10%
Presentation of proposal in class	10%
Data blitz presentation in class	5%
Presentation of thesis results in class	10%
Thesis	25%
Class participation	10%
Supervisor's final grade	30%

- Note: all PSY400 students are required to attend & present at UofT poster day
- Late penalty for any assignment is 10% per day
- Failure to attend class: 10% of the total course grade per class missed

Written thesis proposals

Written proposals, to a maximum of 10 type-written pages long (not including reference list), double spaced, 12-point font, must be submitted by **Friday, October 17, 2014**. A well-prepared proposal will contain most of the Introduction of the final thesis, a skeleton of the Methods, and an outline of the important points to be addressed in the Results. Especially in the event that you are still busy collecting data as the final deadline nears, this will give you a great head start on the final write-up. If you need to apply for human ethics approval, there may be some overlap between this and the ethics application.

Project proposal presentations

During the first term, students will make oral presentations describing their proposed thesis projects. The purpose of these meetings is to provide feedback on your thesis projects while the projects still are in a relatively early stage. **Each presentation should last no more than 10 minutes**, so that time is available for class members to provide comments and helpful criticisms. Note that all members of the class are expected to attend all presentations.

Presentation of preliminary data in class: Data Blitz

You will be required to present preliminary data early in January, even if all you have is a single subject at that time. **You are allowed to present five slides: theory, hypotheses, methods, results, conclusions. Presentations should be no more than 10 minutes.** All members of the class are expected to attend all data blitz presentations.

Thesis presentation

Toward the end of the second term, you will present your theses as if you were giving a talk at a scientific conference (i.e., tell us what you did, why you did it, what you found, and what it means). **Presentations should not exceed 15 minutes.** All members of the class are expected to attend all presentations.

Thesis Requirements

Theses should report results from a psychological study conducted by the student under the supervision of a faculty member. Students are encouraged to browse through theses submitted in previous years to get a better understanding of what is expected in a thesis; old theses can be obtained from the undergraduate psychology advisor's office.

Every thesis must be submitted as if for publication, in format and style requirements set out in the *APA Publication Manual, 6th edition* (2010). Theses must also include appendices summarizing data and statistical analyses upon which results and conclusions have been based. **Theses must not exceed 20 type-written pages (double spaced, 12-point font), excluding the title page, abstract, references, tables, figures and figure captions, and appendices.**

Two copies of the thesis are due Alison Chasteen's office (SS4057) no later than 4 pm on Thursday, April 2nd, 2015. Hint: Try to get a first draft ready by early March so your supervisor has enough time to give you meaningful feedback.

The thesis grade

The thesis grade indicates the quality of the final version of the thesis. Each thesis will be read by at least one anonymous reviewer that will be chosen from among the faculty who have a familiarity with the general research area. It is important to note that in assigning a grade, **no penalty should be imposed if a reasonable research plan failed to work as intended**. In other words, whatever the results, good research design, clear justification for the study, and thorough and thoughtful presentation of the research are what counts. The referees can weigh several criteria as they deem most appropriate. These criteria are similar to those used in judging the acceptability of an article in a scientific journal.

For example:

- Is the thesis well written?
- Are the research questions and experimental design stated clearly?
- Is the research design appropriate to answer the research question (and does the author state clearly how the design is appropriate)?
- Could a reader replicate the critical elements of the study based on the information given in the methods section?
- Are the results described clearly and completely?
- Are the statistical analyses appropriate, correct, and described clearly and completely?
- Does the author make appropriate use of figures and tables?
- Are the conclusions linked clearly to the data?
- Is there evidence of original thinking and creative contribution in the thesis?
- Is the thesis "scholarly" (how well informed is the author about the thesis topic)?
- Does the thesis conform to APA guidelines for manuscripts submitted to journals?

The supervisor's final grade

The supervisor's grade indicates the quality of the student's work up to, but not including, the final version of the thesis. The supervisor can weigh the following criteria as he or she deems appropriate:

- To what extent was the research question chosen as a result of the student's own initiative, persuasion, and reasoning?
- To what extent were important design issues resolved by the work and reasoning of the student?
- To what extent were data produced through resourceful efforts of the student?
- To what extent did the student analyze the data effectively, with a clear appreciation of the most useful questions to be put to the data?
- To what extent did the student understand his or her findings and their implications?
- To what extent did the student successfully communicate his or her thesis work in the early drafts of the thesis and in conversations with the supervisor?
- To what extent did the student meet individual deadlines set by the supervisor?
- To what extent was learning and progress seen over the course of the year, with signs of new skills acquired and a deepened understanding of the research enterprise?

You are encouraged to discuss these criteria with your supervisor early in the year.

You and your supervisor

Every research program is different, and every researcher runs his or her lab in a different way. You may be doing your thesis in a lab where other undergraduates, graduate students, post docs and technicians are working or you may be the only student involved in your supervisor's research. In general, you should expect to be meeting with your supervisor on a regular basis, perhaps on a pre-assigned hour each week,

to discuss the project as it develops from proposal and planning details of methods to reporting results as they come in, approaching the statistical analysis, and discussing the final write-up. In some cases, another person in the lab such as a grad student or post doc will help you with the technical details of collecting or analyzing data. You may be expected to attend lab meetings, where everyone working in the lab discusses ongoing projects. These can be very worthwhile and fun. Whatever the situation, you should become acquainted with your supervisor's expectations early in the year. Where meetings are involved you should be aware of the importance of keeping appointments and arriving on time having completed any tasks agreed on at the last meeting.

Some questions are best answered by your supervisor. Many students worry that asking questions "makes them look stupid," and they think that their supervisor's grade will be poor if they appear not to understand something. In general, this is not the case. Supervisors often appreciate a student's honesty, particularly if it is accompanied by the desire to learn. If you have a question that cannot be answered by discussion with your PSY400Y classmates, and you cannot find the answer to that question yourself, ask your supervisor. **You can also always ask me about anything to do with the course, your supervisor, your research or anything else related to your work.**

Note that because someone other than your supervisor will be marking the finished thesis, you and your supervisor may collaborate to some extent on making the final write-up as good as possible. This should encourage you to submit drafts of your thesis, or parts of it, for comment as early as possible during the year. For example, once you have started collecting data, you can complete the Methods section.

Thesis research can result in findings that are potentially publishable in a psychology journal. Early in the year you and your supervisor should discuss how s/he would handle publication, including your possible role as an author. You and your supervisor should be familiar with U of T's guidelines on intellectual property. They are on the web at <http://www.sgs.utoronto.ca/Assets/SGS+Digital+Assets/governance/policies/SGS+Intellectual+Property+Guidelines+2007.pdf>. The *APA Publication Manual* also has a section on assignment of authorship which you should read.

Class participation

The class participation grade indicates the extent to which you played an active role in activities, such as discussions in class, project proposals, comments/feedback on other students' project proposals, and oral thesis presentations. Showing up for class is a minimum. Excellent class participation marks require active participation. You are expected to be present throughout all classes. Even having to test subjects or meet with your supervisor are not acceptable excuses!

Penalties

Note: We are required to have penalties and to inform you of them. Please do not be late in meeting the course deadlines.

- Late submission of the thesis: -5% of the thesis grade per day late.
- Late submission of the written thesis proposal: -5% off the proposal grade per day late.
- Failure to present the project proposal to the class: -5% of the total grade plus a zero for the presentation. In other words, do the presentation.

- Failure to present your preliminary data to the class: -5% of the total grade plus a zero for the presentation.
- Failure to present the final results to the class: -5% of the total grade. Plus a zero for the presentation. So do it.
- Failure to attend and present at the U of T poster day: -10% of the total grade.

Presenting at the Ontario undergraduate thesis conference

At the end of each school year, a one-day convention is held for the presentation of talks and posters on thesis research by undergraduates at universities across Ontario. Most students find this conference really enjoyable and also useful so try your best to attend. Information about this year's convention will be passed on as soon as it is available, probably in March. Participation in the conference not only gives you the chance to practice your oral presentation skills, but it also enables you to meet a wide range of students from neighboring universities who have research interests similar to yours. If you choose to continue with a research career in Psychology, some of the folks you meet at the conference will remain your colleagues for years to come. The Psychology Department may be able to provide a small subsidy for travel expenses of those attending, pending approval from the Chair.

University and Departmental Resources

- **Ethics review.** All research in the University that involves living animals, human or nonhuman, including thesis research, must be approved by the appropriate ethics review board before the research can begin. In most cases, the department can provide a speeded review process for thesis students. Students who are planning research projects involving children, older adults, clinical populations or animals should consult with their supervisors to determine whether additional review proceedings are required. It is the responsibility of your supervisor to be sure that all research carried out in his or her laboratory has received the required ethical approval; however, it should be part of your education in this course to learn what is involved and to at least become acquainted with the contents of the approved protocol that covers your research even if you are not responsible for preparing it.
- **PSY100 Subject pool.** Each student in Introductory Psychology can receive bonus points for participating in psychology experiments during the year. PSY400Y class members who would like to use the PSY100 subject pool must follow the procedures laid out by the PSY100 instructors and tutors. The PSY100 coordinator will provide specific information about these procedures early in the term.

September, 2014

To: Psy 400Y thesis supervisors, 2014-15

From: Alison Chasteen, course coordinator
chasteen@psych.utoronto.ca

Dear Colleague:

One of this year's Research Specialists has indicated that you have agreed to supervise his/her Psy 400 thesis research. I'm writing to verify that this is the case and to introduce myself as the coordinator of this course. For your reference, I attach the grading scheme from the handout given to students at the first class.

Please note the students are required to submit a written 8-10 page thesis proposal by **Friday, October 17th**. The mark, worth 10% of the final course grade, will be the average of a mark from you and a mark from me; proposals will be marked and returned by the end of November. My mark will be based on clarity, logic, and organization; yours will take account of the literature review as well. This requirement is designed so the students get some formal feedback part way through the course and so they are forced to start writing parts of the thesis early on.

Please fill in the section at the bottom and return it to me. Don't hesitate to get in touch if you have any concerns during the year. The research specialists are a great group of students – you're lucky to have one working with you.



Date _____

I have agreed to supervise (name) _____
for a PSY 400Y thesis for 2014-15.

I understand that it is my responsibility to provide all necessary space, equipment, and access to subjects as well as supervision of the student's work. Furthermore, it is my responsibility to ensure that all procedures were approved by the Research Ethics Board at the University of Toronto.

(signed) _____

(please return by **Sept. 25th** to Alison Chasteen directly or via the PSY400 student)

Supervisor's Copy of Grading Scheme

Assignment:	Weight
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