PSYCHOLOGY 501 GUIDELINES FOR STUDENTS AND SUPERVISORS September 2015

Course Coordinators

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Learning Objectives for PSYC 501

By the end of this course, successful students should be able to:

Apply the scientific method to construct a research question, formulate research hypotheses, design a study, collect and analyse data, and discuss the implications and limitations of their findings.

Knowledge/Research Skills

- x Build a research study based on existing theory, and extend beyond previous research.
- x Design a viable research question and formulate testable hypotheses.
- x Demonstrate and apply the principles of experimental design.
- x Identify the ethical principles related to their research.
- x Produce an appropriate means of analyzing their data and solve the difficulties involved in data collection and management
- x Assess the implications of their own research.
- x Critique the limitations of their own research.
- x Effectively communicate the results of their research in written form.
- x Effectively communicate and defend the results of their research in oral form.

Professional Skills

- x Successfully work as part of a research team
- x Manage a project from start to finish, seeking help appropriately to solve problems as they arise.
- x Work independently.
- x Accept and provide feedback professionally.

Grading Breakdown:

Proposal and proposal defense (15%): grade provided by thesis coordinator Lab work throughout the year (25%): grade provided by supervisor Written thesis (35%): consensus grade from thesis examining committee Final poster defense (25%): consensus grade from poster examining committee

The final letter grades will not be determined until a few days after the exam period, when the 501 Coordinators will meet to review the entire set of grades. The final grades will be announced after they are submitted to the Registrar's Office.

Stages of the Thesis Course

Stage 1: Preparing and Submitting a Research Proposal

The first critical task is to confirm that you have a thesis supervisor. As far as we know, all students linked up with a supervisor, either last term or during the summer. Even if you believe that you already have an arrangement, you should contact your supervisor and confirm your arrangement **before the end of the first week of the term.** Make sure that you have a clear and explicit understanding with the potential supervisor that he/she has agreed to supervise you and also agreed on the topic.

Should you find that you do need a supervisor, you should contact your course coordinator **immediately.** At this point, almost all supervisors are already committed and the selection is therefore extremely limited.

We do not have firm rules on what sort of research question constitutes a valid topic for a thesis, other than the restriction that the thesis must be empirical; that is, you must deal with data at some level. If you would prefer to do library research instead, then you probably would be better off taking a series of seminars rather than Psyc 501. Archival studies, in which students did not actually collect the data they used, are allowed. However, by their very nature, archival studies are different than projects where students collect the data themselves. If you are contemplating a project that might be regarded as archival, you and your supervisor should consider that examiners will take the following criteria into account:

- 1. significance of the research;
- 2. intellectual input of the student;
- 3. quality of the write-up;
- 4. effort expended in data analysis.

In some circumstances, a group of students may each conduct parts of a larger investigation, as occurs in the sorts of collaborative research in many labs. For example, students may use different experimental manipulations but share control groups. This is acceptable, but we do require that **each thesis constitute work that is unique and substantially the student's own.** The above evaluation criteria apply here as well.

Samples from unique populations (such as prisoners, infants, school children, individuals with mental illness, etc.) are interesting to work with but have been associated in the past with two major problems: (a) ethical clearance to work with such groups is more diff

other students in the seminar to which they will be assigned. The seminars take place during the second half of the Fall term (see below).

As part of your proposal and in consultation with your supervisor, you should **provide an estimate**, **broken down by major tasks** (e.g., planning the research project, proposal write-up, subject recruitment, data collection, data analysis, thesis write-up, etc.) of the number of hours your anticipate spending on your thesis. A final estimate of the average number of hours/week calculated over the entire year should be included at the end of this section. This figure helps your supervisor and the coordinators ensure that you will be doing an appropriate amount of work in this course. Because Psyc 501 is considered to be equivalent to 1.5 courses, and each course should take 7.5 hours/week, you should be spending approximately 90 hours per semester on your thesis as a general guideline. Of course, the number of hours will vary throughout the year (i.e. writing and analysis will take more time than preparing your presentation).

We suggest that you ask your supervisor for some examples of previously accepted proposals in your area. Examples of well-written proposals from recent years will also be posted on Moodle.

Once you and your supervisor are both satisfied with your proposal, you should **email a copy to** psyc501@queensu.ca NO LATER than 5:00 p.m. on October 16, 2015. You must also carbon copy (cc) this email to your supervisor.

PLEASE SEE THE 501-PROPOSAL CHECKLIST (AVAILABLE ON MOODLE) AND THE THESIS PROPOSAL AND ETHICS HANDOUT (AVAILABLE ON MOODLE) FOR SPECIFIC DIRECTIONS ON HOW TO SUBMIT YOUR PROPOSAL AND WHAT TO INCLUDE WITH YOUR SUBMISSION.

Given the size of the class, the TA will not read any drafts of your proposal. This is your

Students are expected to complete ethics training and submit documentation of completion of this training with their proposal.

For students who are working with animals, you will complete three mandatory courses:

Should a change in the proposal become necessary after the initial approval, it is both the student's and the supervisor's responsibility to obtain written approval from the course Coordinators for changes. Note that trivial changes, such as the wording of instructions, do not need approval, but any substantive changes (e.g., that substantially change the research design or the amount of work involved) should be submitted for approval. Your thesis might be unacceptable if you bypass this procedure, so check in doubtful cases. This applies especially to changes that involve the treatment of subjects, and might therefore have ethical implications. In

Each student will act as a reader for two proposal presentations. It is the responsibility of the readers to download their assigned proposal(s), from Moodle, to read in advance of the presentation. When acting as a "reader," come to class with written comments/questions that you have generated for the assigned proposal. You should start off with some brief comments (e.g., what did you like about the proposal). Also write out at least 5-6 well thought out questions. You might only ask a portion of these questions. Keep in mind that each proposal presentation has 2 readers and so you will want to have some questions on reserve (in case the other reader has the same questions as you). You do not have to hand in your written comments/questions. They are meant to guide the time you spend asking the presenter questions.

During seminars, <u>all</u> students will be asked to fill out a feedback form for each of the proposal presentations. This feedback is to be constructive to help each student better understand how their presentations came across. This will be valuable in learning about what needs more explanation, what is clear, what works, and what needs some attention.

Seminar attendance will be taken. The general performance of all students (as a presenter, reader and seminar participant) will be used as an additional piece of information when the coordinators are fine-tuning the final grades at the end of the year.

Stage 3: Research work

Once you have received approval, it's time to begin the actual research. Start collecting data as early as possible (preferably before the end of the first term).

The kinds of research that are likely to be undertaken are so wide-ranging that few generally applicable rules can be suggested. It should be clearly understood, however, that whatever the topic, the research should be completed *as soon as possible*. Also, in general, all students must conduct their own research.

A few other salient points to note are:

- 1. Equipment and Funds: The Psychology Department has no funding available for support of undergraduate thesis research. Materials, equipment, animals, etc. in small quantities may sometimes be used, if they are already available. If Departmental equipment has to be borrowed, or if special equipment has to be made, then your supervisor must contact the Departmental Workshop before your research proposal has been submitted. You should not assume that equipment, space or other resources will be automatically available, unless your supervisor can provide them directly. Equipment problems are one of the more frequent reasons for delayed theses. You should check for yourself that all necessary equipment is available and working, despite what anyone tells you. Your proposal should include explicit statements about the availability of all equipment and resources you will need.
- 2. *Participants*: If your study involves recruiting human participants from the PSYC 100 Subject Pool then you must first obtain permission to do so (information regarding subject pool procedures will follow in a separate document).
- 3. Animal work: If you do a study using animal subjects, your supervisor normally will already have permission from the University Animal Care Committee that includes the research that you propose. If your supervisor does not have such permission, then your supervisor must first get it. This often takes considerable time (many weeks), so you should get started as soon as possible. However, you must still submit a Psyc 501 Proposal & Ethics application, as described in the Proposal & Ethics Tutorial, even if your supervisor does have permission.

You must contact Lisa Wilberforce (<u>psycatec@queensu.ca</u>; 613-533-6016) if you are doing animal research and she will provide information on necessary certifications you must have to do this type of work.

4. *Lectures*: The teaching assistant will be giving lectures in the first and second terms about ethics and the subject pool, reviewing SPSS, and thesis, poster, & defense preparation. Lecture times are provided in the syllabus timeline. **Lectures are mandatory.**

Stage 4: Report writing

You can do much of the writing before data collection is complete. For example, the way your data turn out is unlikely to affect your introduction, so the draft of the final introduction to the work may be started almost as soon as the proposal is accepted. The method for your study is decided as soon as ethics are cleared and thus can be written up early as well. You should keep in close touch with your supervisor at all times concerning the progress of your research and writing. Remember to allow time for many drafts before your supervisor is satisfied with it. Hurried write-ups do not earn top marks.

The model for the written report should be a thesis rather than a journal article. The thesis format is briefly outlined in the Sixth Edition of the APA Publication Manual (p. 207-208). In general, you should follow APA format as outlined for theses in the current manual. Any major deviation from APA format should be undertaken only with very good reasons. In case of doubt, consult your 501 coordinators or TA.

A thesis should have a clear title that is descriptive of the research, but is brief and to the point. It should also contain a clear abstract (maximum 250 words). The abstract is often the last and most hastily written part of the report, but it should not be so neglected because it is the part that a person who finds the thesis in the Psychology archives will read in order to decide whether to read the rest.

Avoid abbreviations. Some are allowed, but the safer course is to use none. (If you must indulge, see the APA manual for guidelines on how to use abbreviations). Remember, a thesis is written for both a specialized and a general audience. Define your terms and explain your methods so that a readers can understand your thesis even if they are unfamiliar with the area.

IMPORTANT: The average length of an honours thesis is 30 pages, excluding appendices.

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Stage 5: Handing in your thesis

A copy of your thesis, approved by your supervisor, must be submitted to the PSYC501 email by 5:00pm *at least two weeks before the date of the poster day*. *This is your submission deadline*. File name format: LastName_FirstName_Psyc501_Thesis_2015.

If you must submit late, you must notify your coordinator