

**PSYCHOLOGY 501**  
**GUIDELINES FOR STUDENTS AND SUPERVISORS**  
**September 2015**

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**Course Coordinators**

**Section A**

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**Course Outline  
Mandatory Seminars for 501**

**Tuesday classes: 10:00AM-11:30AM**

**Thursday classes: 8:30AM-10:00AM**

Date	Topic	Location
Tuesday September 13	Introduction to 501 Proposal Requirements	Both sections in Dupuis 215
Tuesday September 20 <b>Mandatory for students conducting animal research, others welcome</b>	Guest speaker on Animal Research Ethics; Information on Animal Research Ethics form	Hum 223
Thursday September 22	Proposal; Ethics and Subject Pool	Both sections in Dupuis 215
<b>Friday October 14: ALL THESIS PROPOSALS DUE</b>		
Tuesday October 25	Proposal Presentations	Section A Hum 223 Section B Bioscience 2109
Thursday October 27	Proposal Presentations	Section A Hum 223 Section B Bioscience 2109
Tuesday November 1	Proposal Presentations	Section A Hum 223 Section B Bioscience 2109
Thursday November 3	Proposal Presentations	Section A Hum 223 Section B Bioscience 2109
Tuesday November 8	Proposal Presentations	Section A Hum 223 Section B Bioscience 2109
Thursday November 10	Proposal Presentations	Section A Hum 223 Section B Bioscience 2109
Tuesday November 15	Proposal Presentations	Section A Hum 223 Section B Bioscience 2109
Thursday November 17	Proposal Presentations	Section A Hum 223 Section B Bioscience 2109
Tuesday February 7	Stats Review	Section A Hum 223
Thursday February 9	Stats Review	Section B Hum 223
Tuesday February 28	Thesis Defense Information Formatting the Thesis	Section A Hum 223
Thursday March 2	Thesis Defense Information Formatting the Thesis	Section B Hum 223
Tuesday March 7	Poster Formatting	Section A Hum 223
Thursday March 9	Poster Formatting	Section B Hum 223

*Please read this material carefully. Save it for later reference - you should reread sections later as you proceed through the stages of your thesis.*

*Throughout this document, we will refer to “your course coordinator”. If you are in Section A, your course coordinator is Dr. Flanagan (Fall) and Dr. Harkness (Winter). If you are in Section B, your course coordinator is Dr. Castelhana.*

We will be meeting regularly for the first two weeks of classes. It is your responsibility to keep your course coordinator informed about your supervisor and proposed topic. Email has proven to be the most effective way to distribute information to the class, but it may take some time before we have complete and accurate lists. Remember to check your Queen's e-mail regularly, and be sure that your mailbox is not full. If you do not receive any email messages in the first few weeks of the term, you should check with Ms. Allison Leverette in the Undergraduate Office or your Course Coordinator to ensure that we have your correct e-address in our database. We prefer that you use your university-based account for all e-mail correspondence pertaining to this course.

Please take notice of the PSYC 501 board outside the Undergraduate Office (Humphrey 225). The bulletin board is also where you will find material on things such as graduate fellowships and applications, etc. Please remember to check this board regularly.

These Guidelines have been prepared to help you negotiate your way through the course with a minimum of stress and confusion. You should study them before you begin work on your thesis, and consult the appropriate sections as you move through the year. Students usually find that there is a great deal for them to learn in the course because, for most of you this will be your first experience in carrying a research project through all of its stages. Learning how to do this presents great opportunities, but also challenges.

It is important that you are aware that not only must you complete your thesis successfully, but you must also do so within some fairly stringent and unavoidable time constraints. The deadlines are unavoidable because all of the work, (including formulation of the research plan, gathering the data, analysis of the results and preparation of the written report, and the examination), must be completed in time to allow submission of marks to the Faculty Office in the first week of May. As a result, you not only have a great deal to learn but you also have to do it on a fairly tight schedule.

Remember that the marks deadline for graduates is tighter than for other students, because marks not only have to be recorded but also must be used to calculate eligibility for graduation and class of degree. If you expect to graduate at the end of the academic year there is very little leeway -- should you become delayed, you seriously jeopardize your chance of graduating on schedule. Moreover, you will find that most stages of your research take considerably more time (about 3 times more!) than you might anticipate. Once you fall behind it is very difficult to catch up. Thus, strict deadlines have been established in order to keep students on track. Adherence to the schedule is very much in your best interest, as it is established to facilitate completion of your thesis work on time.

Remember that we are here to assist you in making your thesis a rewarding and educational experience. If you have problems or questions, your first resource should be your supervisor, but if he/she can't answer or help in every way necessary, do not hesitate to consult us - the sooner the better! It is important and in your best interest that you let your supervisor know of your progress regularly; problems can and do arise, and can be handled far more easily if there is advanced warning.

### **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

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

### Professional Skills

- Successfully work as part of a research team
- Manage a project from start to finish, seeking help appropriately to solve problems as they arise.
- Work independently.
- 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 difficult to obtain and can cause unacceptable delays; (b) some students have had samples from such populations "arranged" only to be told they must wait (in some cases months) before starting, or even finding that the sample or access to it was no longer available at all. If you want to work with such populations, we strongly suggest that you consider your decision very carefully and discuss it with your supervisor. If you decide to try it, an early start is particularly important and you should be prepared for some delays. You should also have a contingency plan for salvaging a thesis if (when) disaster strikes. If you are considering work with such populations, please also consult with your course coordinator to review your plan and get their advice on the feasibility of the project, as soon as possible.

After choosing your research question, you have a few weeks in which to generate a clear and definite proposal for your research project. This is done in close consultation with your supervisor, and ordinarily takes several revisions before submission to your course coordinator. Proposals should be ***no more than 10 double-spaced pages, including tables and figures, but excluding references or attachments such as questionnaires to be used***. They must contain adequate information for a judgment to be made on the rationale, methodology and proposed analysis of results.

***Your supervisor must read and fully approve the proposal (by signing the title page)***. You must cc' your supervisor on the email when you submit your proposal as an indication of their approval. The specific format used to write the proposal is available on OnQ.

***Please note that students may NOT start data collection without Psyc 501 ethics clearance***. However, if students and supervisors wish to start collecting data early in the term, they may submit their proposal any time after the first day of classes in the Fall to the course coordinator. Please note that every student will be randomly assigned a time to orally present their proposal to 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 you 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 OnQ.

*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 14, 2016.** You must also carbon copy (cc) this email to your supervisor.*

**PLEASE SEE THE 501-PROPOSAL CHECKLIST (AVAILABLE ON ONQ) AND THE THESIS PROPOSAL AND ETHICS HANDOUT (AVAILABLE ON ONQ) 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 supervisor's responsibility.**

**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: WHIMIS, the Online Animal Research Ethics course and the Departmental Animal Care Seminar (with Lisa Wilberforce). Please contact Lisa Wilberforce ([psycatec@queensu.ca](mailto:psycatec@queensu.ca); 613-533-6016) if you are doing animal research and she will provide further information on the mandatory courses.

All other students will complete the Tri-Council's online ethics module. This module takes a total of approximately two-four hours to complete. You need not complete the module in one sitting, as you are able to save frequently and return to the module when you are able. A confirmation page will appear when you have successfully completed the module. You are required to include this page in your proposal. The module is available here:

<http://tcps2core.ca/welcome>

If your project is part of an already approved protocol, then once you submit your proposal and ethics package, they will be reviewed by the coordinator. If your project is new and does not fall under an already approved protocol, then your materials are reviewed by your course coordinator and the Psychology REB committee. The Psychology REB committee will either clear your project for final Ethics Approval or will forward your proposal to the University General Research Ethics Board (GREB) or Health Sciences Research Ethics Board (HSREB) for final approval. If your project needs to be forwarded to the University Level committees, then you will need to fill out an online application on TRAQ. You will be notified by email when your proposal has been cleared and you are permitted to start your data collection.

**You CANNOT collect data until the course coordinator has explicitly granted permission, which is contingent on successful clearance of ethics and an accepted proposal.**

**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 cases such as these, Letter of Information etc might need to be changed and ethics clearance needs to be confirmed.

## **Stage 2: Seminars: Research Proposal Presentations**

Proposal presentations will start on Tuesday, October 25 for Sections A1 and B1, and Thursday October 27 for Sections A2 and B2. *As part of the course, all students are required to attend the section to which they have been assigned (see PowerPoint from the Introductory Class).*

These seminars allow students to learn from each other how to deal with a variety of different research problems. You can only do one thesis yourself, but while you are developing your own ideas it can be very instructive to learn about the problems faced by your peers and to see how they approach solutions. The seminars also allow discussion of some issues in common, such as the ethics of research. How your peers handle the questions they receive during the seminars will be invaluable experience for your own defense in April.

The class is split into two sections (Section A and Section B). Within those sections, there are two subsections: Sections A1 and B1 will attend the Monday proposal presentations, and Sections A2 and B2 will attend the Wednesday proposal presentations. The class schedule is posted above. At the first class, you will be randomly assigned a date for your presentation. You will also be assigned as a reader for two other presentations. When you are a reader, your responsibility will be to read the proposal and come prepared to ask several well-developed questions.

Each section will meet once a week for five to six weeks (depending on the number of students enrolled) and will hear three proposals at each meeting. Each student will prepare an oral presentation of their proposal, which they will deliver to other members of the seminar section (both students and the coordinator) to provide an opportunity for comment and discussion. You should provide a clear understanding of the precise methods to be used and the research design. You may use whatever aids you wish, (e.g., flow charts, diagrams, etc). We strongly recommend that you use PowerPoint to present your material. You will be allowed a total of approximately 20 minutes. You should present the substance of the proposal, i.e., the problem with its background and rationale, research design, and proposed data analysis, in **no more than 10 minutes**, in order to leave time for group discussion.

For your PowerPoint presentation, be sure to bring a memory stick (that has been scanned for viruses) with a copy of your talk before the class begins. Remember, your talk should be **no longer than 10 minutes. You should bring your own laptop for your presentation. Mac users will need to bring an adaptor.**

Please note: Your proposal will be posted online on onQ.

Your proposal presentation is an opportunity for you to get useful advice and feedback, as well as practice in preparing for your final defense. The seminars often produce very useful suggestions for revision and improvement of the proposals. Remember that the feedback you get is "free", (i.e., criticism on that occasion will not cost you any points; it is intended to show you possible problems to save you trouble later).

**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 onQ, 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, all 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 ([psycatec@queensu.ca](mailto:psycatec@queensu.ca); 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. Theses that are longer than 50 pages, excluding appendices, will not be accepted.* For a description of material suitable as appendices, see the APA Manual.

Before any further examination, the thesis must be approved in its final form by your supervisor. Again, remember to allow enough time before your submission deadlines for your supervisor to read the thesis a number of times and suggest revisions: the time during which you will be writing is a busy time for academic work, and you should plan for some delays in your supervisor's reading the drafts. Schedule the interim time for minor tasks, such as the compilation of references or table of contents. It may also take more time than you expect to make any revisions. The secret of good writing is rewriting.

If you plan to use university computing facilities, you should expect them to be crowded at the end of term. Do not set up your schedule to depend on last-minute access to anything you will need, from data processing to advice.

**IMPORTANT!:** *Please understand that given the size of the class, it is not the TA's role to assist you with questions concerning statistics, reading drafts, etc. These remain the responsibility of your supervisor.*

#### **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 that you are going to be late **AND** obtain their agreement. Otherwise, you may be required to delay the defense, or even face late penalties. Your committee will consist of: your thesis coordinator, your supervisor, and an additional examiner. We will schedule the additional examiners by the end of March. Note that this committee will only be evaluating your written thesis. A separate committee will evaluate your poster defense (see below).

### **Stage 6: Poster presentation and defense**

There will be a lecture to help prepare you for the poster presentation and defense. The date and examiners for the poster presentations defenses will be posted by the end of Fall term. The poster day will be at some point in April. If you have a conflict with the poster day, it is your responsibility to contact your course coordinator right away.

The defense format is designed to simulate a poster symposium at a professional conference. The poster day will last from 9:00am – 4:00pm, and each student will be assigned a 2-hour block during which they will need to be by their poster. Each student's poster presentation will be examined and graded by 3 faculty members who will not have read the written thesis. At their poster, students will meet with each of the three faculty members separately for ~20-25 minutes over the course of their 2-hour block. During each meeting you will provide an ~8-10-minute summary of your poster and then answer questions for ~10-15 minutes. That is, you will have the opportunity to perform your brief presentation 3 times, and will have at least 30-45 minutes total across the three examiners to defend your thesis through questioning

It is important to practice your presentation beforehand. Keep the presentation short and clear. By the time you are finished, you will likely find yourself starting to relax, and rightfully so, so you can proceed to the unrehearsed part of the exam. Don't worry if you are somewhat anxious before it starts - almost everyone is. The examiners expect this, and will try to help you relax so that you may truly demonstrate your ability.

You will be judged on how well you demonstrate mastery of your research problem and of the area generally. Some questions will be very specific, and others may be very, very general. You will not be able to tell from the questions how any given committee member evaluates the thesis - sometimes examiners will save the toughest questions for the best theses. Students should bring a copy of their thesis to the defense, so that they can refer to the aspect(s) of their study that the examiners ask them about.

### **DELAYS IN COMPLETING THE DEFENSE**

Delays occasioned by illness, personal or family problems, etc., must be documented by the Associate Dean of Studies and reported to the faculty coordinators **in writing** in order to obtain an authorized delay and avoid penalty. Inform your supervisor, but you can get an authorization for the delay only from the course coordinator.

Delays occasioned by problems in completing research should also be reported in writing to the faculty coordinators as soon as they occur. Automatic or advance authorization for delays in the examination will not be given. Rather, the student must outline the circumstances producing the delay to the course coordinators, who will then decide on appropriate action. The maximum

penalties that can be levied are shown below. Clearly, it will be in your best interest to minimize any delay.

<i>Unexcused Delay</i>	<i>Maximum Grade that can be Awarded</i>
1-7 days after assigned date of defense	A-
8-21 days past assigned date of defense	B
22 or more days past assigned date for defense	C

As noted earlier, late submissions may result in missing the Degree List for the Spring Convocation.

#### **CAUTIONARY NOTE**

Inevitably, circumstances can arise that are beyond your control and that may interfere with timely completion of your thesis. *As soon as you become aware of a problem*, consult one of the course coordinators.

#### **FINAL ENCOURAGING NOTE**

These guidelines are full of cautions that may be unnecessary for most students, but problems do happen. However, you should not be discouraged or intimidated by the admonitory tone of this document. In the past, most honours theses have been of very high quality, and we expect the same again this year. Most students proceed through the challenges successfully, and rate the experience as educationally outstanding.

We are here to help you to make your thesis a high point of your intellectual growth and development, and to minimize the problems. Do not hesitate to ask for advice, consultation, or information when you need it. For more general academic resources that may be helpful to you throughout this course, you may also wish to visit the Arts and Science Undergraduate web page at <http://www.asus.queensu.ca/acsfacts>.

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