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Honours Thesis Handbook

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2011/2012 Psychology Honours Thesis (Psych 499) Handbook



July 11, 2012 Department of Psychology University of Waterloo

Waterloo, Ontario, Canada N2L 3G1

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HONOURS THESIS (PSYCH 499A/B/C)

What is an Honours Thesis?

Psychology is a scientific approach to understanding mind and behaviour. Honours Psychology students all learn about the body of knowledge that exists in psychology as well as the scientific procedures for making new discoveries. The Honours Thesis course (Psych 499A/B/C) is an optional course for those who have a strong interest in conducting original research and wish to gain greater experience in research design, data analysis and interpretation.

Students carry out the Honours Thesis project under the supervision of a faculty member and present the findings in a scholarly paper. An Honours Thesis can be an empirical research project or more rarely a thesis of a theoretical nature. For an empirical project, the student develops a testable hypothesis and uses scientific procedures to evaluate the hypothesis. For a theoretical project, the student integrates and evaluates existing evidence to offer new interpretations and hypotheses. The difference between the two types of projects is basically the same as the difference between an article in *Psychological Review* or *Psychological Bulletin*, and an article in any of the experimental journals. A regular journal article typically reports the result of some empirical investigation and discusses its significance. A *Psychological Review* paper on the other hand, offers a theoretical contribution (e.g., suggesting a new theoretical approach or a way of revising an old one and showing how the

new approach may be tested). A *Psychological Bulletin* article usually offers a review of an evaluative and integrative character, leading to conclusions and some closure about the state of the issue and future directions for research.

Students who plan to apply for admission to graduate school in psychology are typically advised to do an empirical research project for the Honours Thesis. Students who choose to do a theoretical paper should discuss their decision with the Psych 499 Coordinator (see below) early in the Psych 499A term.

The topic of investigation for the Honours Thesis will be based on a combination of the student's and the supervisor's interests.

Students in year two or three who are considering whether or not they want to do an Honours Thesis can learn more about what is involved in doing an Honours Thesis by doing any of the following:

- attending an Honours Thesis Orientation Meeting. The meeting is typically on the first Tuesday of each academic term. The official date and time of the meeting will be posted on the web.
- attending Psych 499B oral presentations by other students. The presentation schedule is posted on the Psych 499 Bulletin Board outside the Psychology Undergraduate Office (PAS 4005/4006), and outside the Psychology Support Office (PAS 3017), as well as on the web. Presentations are open to everyone.
- reading a few of the sample Honours Theses that are available to borrow at the Psychology UG Office (PAS 4005).

In addition to the student's Honours Thesis Supervisor, another resource is the Psych 499 Course Coordinator. The Psych 499 Coordinator conducts the Thesis Orientation Meeting at the start of each term and provides feedback to students on their research proposals. If students have questions or concerns regarding the procedures for doing an Honours Thesis that cannot be answered by their Thesis Supervisor, they should contact the Psych 499 Coordinator.

The Honours Thesis course (Psych 499A/B/C) is worth 1.5 units (i.e., 3 term courses).

Who Should do an Honours Thesis?

Honours Psychology majors are not required to do an Honours Thesis.

Good reasons for doing an Honours Thesis include:

- An Honours Thesis is a recommended culmination of the extensive training that Honours Psychology majors receive in research methods and data analysis (e.g., Psych 291, 292, 391, 393-399, 492). Psych 499 is a good choice for students who have a strong interest in, and commitment to, conducting original research and wish to gain greater experience in research design, data analysis and interpretation.
- An Honours degree in psychology that includes a thesis is typically required for admission to graduate programs in psychology.
- Thesis supervisors are able to write more meaningful reference letters for students' applications for further studies, scholarships, or employment.

Prerequisites for Admission to Psych 499

The prerequisites for Psych 499 are all of the following:

- · enrolment in Honours Psychology or Make-Up Psychology
- successful completion of Psych 291, 292, 391, and at least one of Psych 392-399, 483, 484
- 60% cumulative overall average
- 82% cumulative psychology average

In addition to the above formal prerequisites, we assume that all students who are enrolling in Psych 499 will have completed at least 4 of the 5 required "Discipline Core Courses" (i.e., Psych 207, 211, 253, 257, 261) prior to the Psych 499A enrolment term.

See "Class Enrolment for Psych 499A/B/C" below for further details regarding course enrolment, and the Psych 499 Application for students without the course prerequisites.

Selecting a Topic for the Honours Thesis

The topic of the Honours Thesis will be based on a combination of the interests of the student and his/her Thesis Supervisor. One approach for selecting an Honours Thesis topic is for the student to first find a Thesis Supervisor who has similar interests to his/her own, and then for the student and the Thesis Supervisor to develop an Honours Thesis proposal which compliments the faculty member's current research. Alternatively, some students have more specific research interests and will seek an appropriate Thesis Supervisor. Students are advised

^{*}calendar descriptions as well as course outlines

against developing an Honours Thesis project in too much detail before securing a Thesis Supervisor.

Click here to review the titles of some of the Honours Theses recently supervised by our faculty members.

See below for the research interests of individual faculty members.

Finding a Thesis Supervisor

Each student who enrols in Psych 499 must obtain a supervisor for his/her Honours Thesis project. <u>These</u> arrangements should be made at least four to eight months prior to the Psych 499A term and a Thesis Supervisor must be finalized by the eighth day of classes for the Psych 499A term.

All full-time faculty members in the Psychology Department are potential Thesis Supervisors. Think carefully about what you want to tell faculty members about yourself before making contact (think 'foot-in-the-door'). For example, inform a potential supervisor of the following:

- for which school terms you are seeking a thesis supervisor
 (If not planning to do Psych 499 over back-to-back school terms, please explain why e.g., Co-op work term).
- · why you are interested in doing an honours thesis
- the program that you are enrolled in (e.g., BA versus BSc, Co-op versus Regular stream)
- · your year of study and target date for graduation
- when you will complete the prerequisites for enrolment in Psych 499A (see above for details)
- · your cumulative overall and psychology average (highlight improvement if applicable)
- · your grades for research methods and statistics courses
- · your educational and career goals
- your volunteer/work experience that you have had previously and with whom
- why are you interested in doing your thesis under his/her supervision e.g.,
 - Did you work in his/her lab as a volunteer or paid research assistant?
 - $\circ~$ Did you take a course with him/her previously?
 - Have you read articles that he/she wrote?
 - Do his/her interests relate to your interests for studies at the graduate level and/or future employment?
 - · Were you referred by someone and why?

The search for a Thesis Supervisor will be easier if you establish rapport *during second and third year* with faculty members who are potential Thesis Supervisors. <u>Ways to network with faculty members include the following</u>:

- get involved in the faculty member's lab. See 'Research Experience' on the Psych UG web site for further details
- seek advice from faculty members regarding your educational and career goals. For example:
 - the Associate Chair for Undergraduate Affairs currently Colin Ellard
 - faculty members who attended the school(s) you are interested in applying to in the future. See the Faculty listing in the UG Calendar for details
 - faculty members who have interests that relate to your future plans. See below for the research interests of faculty members in our department.
 - faculty members whose labs you worked or volunteered in
- be an active participant in the class discussions for the Advanced Research Methods Courses (Psych 392-399) and Honours Seminars (Psych 453-463).
- enrol in a Directed Studies course (Psych 480-486) where you will receive one-on-one supervision from a faculty member. See the course application form for further details
- · read articles that the faculty member has written and discuss the material with him/her
- attend departmental colloquia and divisional seminars where students can engage in discussions with faculty members about the material presented. Postings appear on the right sidebar of the Psychology Department Home Page

You may find that some faculty members that you approach will have already committed to supervising as many Honours Thesis projects as they feel able to handle for a given year. Be persistent in your search for a thesis supervisor and do not feel discouraged if you need to approach several (i.e., six or eight) people.

Other University of Waterloo faculty members may also serve as Theses Supervisors pending approval from the Psych 499 Coordinator.

If you are unable to obtain a Thesis Supervisor, please speak to the Psych 499 Coordinator.

Faculty members other than the Thesis Supervisor can also be very useful resources during the course of the thesis project. Feel free to discuss your thesis work with any relevant faculty (or graduate students).

Research Interests of the Faculty Members in the Psychology Department and Recent Honours Theses supervised

For <u>research interests</u> of faculty members please refer to the <u>Psychology Faculty Members</u> web site and click on the faculty member's name.

You can sort the list by Name or Area of Study.

Note that faculty members may not be available to supervise Honours Theses during sabbatical dates indicated on the web site.

For <u>recent honours theses</u> supervised by individual faculty members please refer to the <u>Honours Theses</u> Supervised web site.

Class Enrolment for Psych 499A/B/C

Refer to the course enrolment information/instructions on the Psych 499 website.

The Honours Thesis (Psych 499A/B/C) is worth 1.5 units (i.e., 3 term courses). Students may not enroll for all of Psych 499A/B/C in one term. Students should consult with their Thesis Supervisor regarding the appropriate class enrolment sequence for Psych 499. Students can spread the class enrolment for Psych 499A, 499B, and 499C over three terms beginning in the 3B term or over two terms beginning in 4A. Those choosing to do the Honours Thesis over two terms will enroll for Psych 499A in 4A and Psych 499B/C in 4B, or they will enroll for Psych 499A/B in 4A and Psych 499C in 4B. Although students can start an Honours Thesis in any term, the Fall term is typically recommended.

Factors that students should consider when deciding which terms to enroll for Psych 499A/B/C:

- 1. When will the prerequisites for Psych 499 be completed? For example, Honours Psych & Arts and Business Co-op students will not enroll in Psych 499A until the 4A term because the prerequisites for Psych 499 won't be completed until the 3B term.
- 2. Will the Thesis Supervisor be available to supervise the project during the terms that the student proposes to enroll for Psych 499A/B/C (e.g., is the supervisor planning a sabbatical leave or to retire)?
- 3. For co-op students, how will the work/school sequence interfere with the project?
- 4. The amount of time necessary to obtain ethics clearance varies depending on the participants required.
- 5. When is the optimal timing for data collection? For example, if Psych 101 students will be participants for the study, one has to consider the ratio of Psych 101 students to researchers that are available in a given term. The Fall term is typically the best time to collect data from this population, Winter term second best, and the Spring term the poorest.
- 6. What other responsibilities does the student have (e.g., course selections, personal circumstances) in a given term?
- 7. The Thesis Supervisor requires a sufficient amount of time to get to know the student before he/she is asked to write the student recommendation letters (e.g., for applications for graduate school, scholarships, or employment).

Details are provided in the next 3 sections regarding the course requirements for each of Psych 499A, 499B, and 499C.

Students should be diligent about their responsibilities for the Honours Thesis. Procrastination leads to delays in firming up the research proposal, doing the oral presentation, obtaining ethics clearance, and beginning data collection. Ultimately procrastination can lead to poor quality work and/or a postponement of graduation.

Warnings Regarding a Decision to Discontinue Psych 499

Students should consult with their Thesis Supervisor and the Psychology UG Advisor before dropping any of Psych 499A, 499B, or 499C.

Notes:

- 1. If a student wants to drop any of Psych 499A, 499B, and 499C in the current term, the individual course requests are governed by the same course drop deadlines and penalties (e.g., WD and WF grades) as other courses. Refer to the Faculty of Arts section of the Undergraduate Calendar for further details.
- 2. Dropping Psych 499B and/or Psych 499C in the current term does not remove Psych 499A or Psych 499B from earlier terms.
- 3. If a student does not complete the Honours Thesis, any INC (incomplete) grades for Psych 499A/B/C will be converted to FTC (Failure to Complete = 32% in the average calculations). Further, any IP (in progress) grades for Psych 499A/B/C will be converted to FTC (=32%).
- 4. Honours students with INC and/or IP grades will be unable to graduate (e.g., with a General BA in Psych) until those grades are replaced by a final grade(s) (e.g., 32%) and the grade(s) has been factored into the average calculation. In such cases, the student must meet all graduation requirements, including overall average, Psych average and minimum number of courses required.
- 5. Those who want any grades (e.g., INC, IP, WD, WF, FTC, 32%) for Psych 499 removed from their records are advised to submit a petition to the Examinations and Standings Committee. Before doing so, they should consult with the Psychology UG Advisor.

Course Requirements for Psych 499A - Progress Report

Students should attend the Honours Thesis Orientation Meeting during the Psych 499A term even if they attended a meeting during second or third year. The meeting is usually the first Tuesday of each academic term. The official date and time will be posted on the web. At the meeting, the Psych 499 Coordinator will describe what is involved in doing an Honours Thesis and answer questions. Students will also receive information regarding library resources and procedures for obtaining ethics clearance.

Students must report the name of their Thesis Supervisor to the Psychology UG Advisor by the eighth day of classes for the Psych 499A term. During the Psych 499A term, students must conduct background research on the thesis topic (e.g., formulate a research question, review relevant literature, formulate major hypotheses) and submit a progress report to the Psych 499 Coordinator. Progress reports are due the last day of the examination period for the Psych 499A term. **The Thesis Supervisor must sign the progress report before it is submitted to the Psych 499 Coordinator.** Submit the progress report directly to the Course Coordinator's mailbox in PAS 3021A. Students should keep a copy of their progress report because the reports will not be returned. The Psych 499 Coordinator will contact individual students by e-mail if there is a problem with their progress report.

The progress report should be about 5-10 pages in length and include the following information:

- a title page identifying the document as a "Psych 499A Progress Report", with the proposed title of the project; student's name, address, telephone number, and email address; the name of the honours thesis supervisor; and the signature of the supervisor indicating that he or she has read the report and approved it:
- a statement of the general topic of the proposed research;
- a brief account of the background literature the student has read, together with a brief explanation of its relevance for the project;
- a clear statement of the research questions and/or the major hypotheses that the study will address;
- a brief statement of the further steps that will be necessary to complete (e.g., settling on a research design, etc.) before the student will be ready to submit a research proposal and do an oral presentation.

Psych 499A students who are not concurrently enrolled in Psych 499B typically do not have a fully developed research proposal by the end of the first term of Psych 499. The progress reports should be submitted on time and should include as much detail regarding the research proposal as possible (see next section for further details).

Some Psych 499A students who are not concurrently enrolled in Psych 499B will firm up their research proposals earlier than expected and will want to do, and are encouraged to do, the oral presentation of the research proposal in the first term of Psych 499 (see next section for further details). In these cases, the IP grade for Psych 499B will be applied to the academic term in which the student formally enrolls for Psych 499B.

Students who submit progress reports will receive an IP (in progress) grade for Psych 499A; those who do not will receive an INC (incomplete) grade for Psych 499A. INC and IP grades for Psych 499 do not impact on average calculations and students with either of these grades can be considered for the Dean's Honours List. However, students with INC grades are not eligible for scholarship consideration. Note that INC grades convert to FTC (failure to complete = 32%) after 70 days.

Course Requirements for Psych 499B - Oral Presentation of the Thesis Proposal

During the Psych 499B term, students must finalize the research proposal for their Honours Thesis project and present this information orally to the Psych 499 Coordinator and the student's Thesis Supervisor. Although the presentation is not graded, it is a course requirement that must precede the completed thesis. The presentation gives the student an opportunity to discuss their research proposals with a wider audience and to receive feedback regarding their literature review and the scope, design, testing procedures, etc., for their projects.

It is also essential that students who are doing an empirical research project involving human or animal participants formally apply for ethics clearance, and that they receive ethics clearance before beginning data collection (see 'Obtaining Ethics Clearance for Research with Human or Animal Participants' for further details).

Students should contact the Psychology UG Program Assistant early in the Psych 499B term to book the date and time for their oral presentation. The Psych 499 Coordinator will attend and conduct the presentation. Presentations occur during the first three months of each term (available dates/times and current presentation schedule are posted on the web). The presentation should be 25 minutes in length followed by a 25 minute period for discussion and questions. The schedule of presenters/topics is posted on the Psych 499 Bulletin Board outside the Psychology UG Office (PAS 4005/4006), outside the Psychology UG Program Assistant's Office (PAS 4053), as well as on the Psych 499 web site. Students are encouraged to attend other students' presentations.

A written version of the research proposal must be submitted to the mailbox of the Psych 499 Coordinator at least three working days prior to the scheduled date of the student's oral presentation of the proposal (mailboxes are in PAS 3021A). For empirical research projects, the proposal must include the following: a title page identifying the document as a "Psych 499B Research Proposal"; a brief review of the relevant scientific literature; a clear statement of the research question and major hypotheses to be examined; the planned method, including the number and types of participants, the design, the task or tests to be given, and the procedure to be used; the statistical tests and comparisons that are planned; and the expected date for beginning data collection. For a theoretical research project, the proposal must include a clear review of the issues, theories, or constructs to be analyzed; a description of the scholarly database to be used (including a list of important references); and a clear account of the intended contribution of the work (i.e., how it will advance understanding).

The research proposal must be approved and signed by the student's Thesis Supervisor before the proposal is submitted to the Psych 499 Coordinator. Students can get a better idea of the content and format required for the research proposal by referring to the methods section of model honours theses that are available for examination at the Psychology UG Program Assistant's office. Students should keep a copy of their research proposal because the copy that is submitted to the Psych 499 Coordinator will not be returned.

Students who have completed the oral presentation requirement will receive an IP (in progress) grade for Psych 499B; those who have not will receive an INC (incomplete) grade for Psych 499B. INC and IP grades for Psych 499 do not impact on average calculations and students with either of these grades can be considered for the Dean's Honours List. *However, students with INC grades are not eligible for scholarship consideration.* Note that INC grades convert to FTC (failure to complete = 32%) after 70 days.

Students who enroll in Psych 499A and 499B in the same term and satisfy the oral presentation requirement that term will not be required to also submit a progress report.

On-Line Surveys

Honours Thesis students who require assistance regarding research software and the development of on-line surveys, beyond advice from the Honours Thesis Supervisor, may wish to seek advice from Bill Eickmeier (Computer Systems Manager and Research Programmer; PAS 4008; Ext. 36638; e-mail bee@uwaterloo.ca). Students are expected to manage much of this process independently and will be given access to a self-help website. Most students will be able to work independently using the web form template notes Bill has posted on the web. However, Bill is available to provide additional guidance if he is given at least three to four weeks advance notice.

Caution Regarding Off-Campus Data Collection

If you are planning to collect data off-campus, please read carefully the "Field Work Risk Management" requirements provided by the UW Safety Office. "Field Work" refers to any activity undertaken by members of the University in any location external to UW campuses for the purpose of research, study, training or learning.

We assume that insurance for private vehicles is up to the owners and that insurance for rental vehicles, if applicable, would be through the rental company. Click here for further details regarding UW policies regarding travel.

Please discuss your plans for off-campus data collection with your Thesis Supervisor and the Psych 499 Course Coordinator in advance to ensure that all bases are covered with regards to waivers, insurance, etc.

Course Requirements for Psych 499C - Completing the Thesis and Submitting it for Marking

In the Psych 499C term, students will complete the data collection for their project (see the previous paragraphs if using on-line surveys or doing off-campus data collection), analyze/evaluate the data, and finish writing the Honours Thesis. The Honours Thesis must be written in the form indicated by the APA Publication Manual (available at the Bookstore), but may be more abbreviated than a regular journal article. Sample Honours Theses can be borrowed for up to two weeks from the Psychology UG Program Assistant.

For an empirical research project, the following sections are required in the thesis:

- abstract.
- introduction (literature review and the hypothesis),
- methods (participants, design, task or test to be given, testing procedures, measures),
- results.
- discussion.
- · references.

It is not necessary to append ORE application forms to the completed Honours Thesis. However, a copy of the formal notification of ethics clearance is required.

The sections and subsections required for theoretical papers will be slightly different than for empirical research projects, and will vary according to the topic being studied. If possible, students should plan the layout for the theoretical paper in the Psych 499B term because the plan may guide their literature review. Students should consult with their Thesis Supervisor and the Psych 499 Coordinator about the layout.

Normally students will receive feedback from their Thesis Supervisor on at least one or two drafts of the thesis before the final paper is submitted for marking.

Submitting the Thesis for Marking:

The final version of the thesis is due the last day of the examination period for the Psych 499C term.

In order for the Psychology Department to keep track of the theses that are submitted for marking and ensure that marks are forwarded to the Registrar's Office as quickly as possible, students must submit one hard copy of the Honours Thesis to Theresa (PAS 4053) who will coordinate grading by the Thesis Supervisor and the Course Coordinator, and will submit Psych 499 grades to the Registrar's Office. The marking process is as follows:

- Receipt of the thesis will be recorded and the thesis will be forwarded to the student's thesis supervisor for comments and a grade recommendation. The thesis supervisor will return the thesis and grading form to Theresa.
- 2. The thesis and grading form will be given to a second reader, normally the Course Coordinator (or another faculty member who has been appointed by the Department). The second reader will be responsible for assigning the final grade and will return the thesis and grading form to Theresa.
- 3. Theresa will notify the student and the Registrar's Office of the final grade. The final grade for the thesis will be recorded for each of Psych 499A, 499B, and 499C.
- 4. The thesis and page 2 of the grading form will be returned to the student.
- 5. The thesis supervisor will receive a copy of the grading form.

Extensions on the Thesis Submission Deadline:

We will do our best to ensure that students graduate at the preferred convocation date; however, the Psychology Department cannot guarantee that students who submit Honours Theses late for marking will be able to graduate at the preferred convocation date. It is essential that students keep in touch with the Psychology Undergrad Advisor about their progress for completing the Honours Thesis.

Students should refer to the Psych 499 website on a regular basis for information regarding Psych 499 deadlines that may affect the target date for submitting the Honours Thesis for marking (e.g., for getting one's name on the convocation program, for sending transcripts and/or letters regarding completion of the degree to other schools for admission purposes, to be considered for awards, etc.).

We strongly advise that students submit the thesis for marking at least four to six weeks prior to the date of convocation. Further, they should confirm that their Thesis Supervisor will be available to grade the thesis within a few days following submission. Time will also be required for the Psych Undergrad Office to review and confirm graduation requirements, and for the Registrar's Office to obtain all the required signatures on the Recommendation to Graduate form in order for students to graduate.

Students who do not submit an Honours Thesis for marking by the end of the examination period for the Psych 499C term require approval for an extension beyond the thesis submission deadline from their Thesis Supervisor. After speaking with the Thesis Supervisor, the student must report the expected date of completion to the Psychology Undergrad Advisor. They will be given an IP (in progress) grade for Psych 499C if they have done the oral presentation for Psych 499B and they are making reasonable progress on the thesis. Otherwise, an INC (incomplete) grade will be submitted for Psych 499C. INC and IP grades for Psych 499 do not impact on average calculations and students with either of these grades can be considered for the Dean's Honours List. However, students with INC grades are not eligible for scholarship consideration. Note that INC grades convert to FTC

(failure to complete = 32%) after 70 days.

Notes:

- 1. Honours students with INC and/or IP grades for Psych 499ABC will be unable to graduate (e.g., with a General BA in Psych) until those grades are replaced by final grades (e.g., 32%) and the grades have been factored into the average calculation. In such cases, the student must meet all graduation requirements, including overall average, Psych average, and minimum number of courses required.
- 2. If IP grades for all of Psych 499ABC remain on the record for 12 months following the Psych 499C term, the Registrar's Office will convert the IP grades to FTC (failure to complete = 32%). If this occurs, consult with the Psychology Undergrad Advisor regarding your options.

Convocation Awards:

Each year the Psychology Department nominates a student(s) for the following awards: Governor General Silver Medal (university level), the Alumni Gold Medal (faculty level), and the Psychology Departmental Convocation Award. These awards are only given at the June convocation. Typically, only Honours students who have final grades for all course work, including the Honours Thesis, by the first week of May can be considered for these awards. Students whose overall and psychology averages fall in the 88-100% range are strongly encouraged to adhere to the thesis submission deadlines noted above.

Obtaining Ethics Clearance for Research with Human or Animal Participants

The Office of Research Ethics (ORE) at the University of Waterloo is responsible for the ethics review and clearance of all research conducted on and off-campus by University of Waterloo students, staff, and faculty that involves human and animal (live, non-human vertebrates) participants.

Research involving human or animal participants must not begin until notification of full ethics clearance has been provided by the ORE.

Information regarding the application and ethics review process for research involving human participants is available on the Office of Research Ethics web site. However, specific information regarding the ethics application process for Honours thesis research is provided below.

Information regarding the application and ethics review process for research involving animals is also available on the Office of Research Ethics web site.

For individual contacts in the ORE, see 'Contacts' in this handbook.

Ethics Application: Once the rationale and hypotheses for the thesis project have been formulated and basic design and procedures have been determined, the student may submit the project for ethics review and clearance.

In order to ensure that students have a good understanding of the ethics review process and guidelines we strongly recommend that they complete the CORE Tutorial (described below) prior to preparing your ethics application.

Upon completion of the CORE Tutorial, the student may complete the Form 101 ethics application and submit it to the thesis supervisor for approval and signature. In question A7 of the Form 101 the applicant may indicate that Departmental Approval is not required.

Upon receipt of Full Ethics Clearance, and if the student and supervisor are sure that there will be no revisions to the design or procedures, then data collection may begin. Whenever possible though, we encourage you to complete the Research Proposal and Oral Presentation before you begin data collection.

Note that procedures for applying for ethics clearance vary according to the type of sample -- for example, university students versus children in the Early Childhood Education Centre, etc. Further details are provided below.

Study Modifications: Based on feedback provided at the student's Oral Presentation, the student and thesis supervisor may decide to make some modifications to the research plans. If the ethics application has not yet received full ethics clearance, the changes can readily be incorporated within the final stages of the ethics review process by contacting ohrac@uwaterloo.ca. However, if revisions to the project are required after receipt of full ethics Clearance, the student may submit ORE Form 104 (Request for Modification Form), along with revised materials.

Human Participants in Research

Honours Thesis students must read and be familiar with the University of Waterloo guidelines and procedures for conducting research with human participants before submitting their applications for ethics clearance to conduct research.

The following is an excerpt from the guidelines:

"The ethics review process is intended to offer a level of assurance to research participants, the investigators and the University that participants will be involved in ethically sound research and will be engaged in a prior consent process that is fully informed and voluntary. The ethics review process also ensures adequate protection of

individuals' privacy as well as confidentiality of information they provide. In addition, the ethics review process increases the probability that all known and anticipated risks associated with the research are identified and adequately communicated to participants prior to participation. Moreover, it ensures that the known and potential benefits are judged to outweigh potential risks from conducting the research. Procedures used to recruit participants are examined to ensure they are free of explicit or implicit coercion and enable participants to withdraw their consent at any time without fear of reprisal."

Research conducted in the Psychology department follows the ethical guidelines set out in the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans, 2nd edition (TCPS 2).

Associated with the TCPS 2 is an online tutorial called Course on Research Ethics (CORE). CORE is comprised of 8 modules, is self-paced and includes interactive exercises and multi-disciplinary examples. A certificate of completion is provided. CORE replaces and updates the earlier TCPS Tutorial. In order to ensure that you have a better understanding of the ethics review guidelines it is strongly recommended that you complete the CORE Tutorial prior to submitting your ethics application. Please note that if you have already completed the CORE Tutorial as an RA for example, you are not required complete it again. The link to CORE is: http://pre.ethics.gc.ca/eng/education/tutorial-didacticiel/

The particular procedures for applying for ethics clearance for research with human participants depends on the population from which participants are obtained; however, all projects require the submission of an online application form to the ORE.

APPLYING FOR ETHICS CLEARANCE FOR RESEARCH INVOLVING PARTICIPANTS HUMAN PARTICIPANTS Step 1. Submit an ORE Form 101 ethics application electronically using the UW Psychology Department ORE online application system. Research Experiences Group (REG) Step 2. Submit printed copies, single-sided to DERC (Departmental Ethics Any UW Psychology Review Committee) mailbox in PAS Mailroom (PAS 3021A). Department Research Group pools (e.g., WRAP, PSYCpool) a. TWO printed copies of ORE Form 101, signed by you and your faculty UW classes or locations (e.g., supervisor Student Life Centre) Any population outside UW b. TWO printed copies of your attachments which must include: other than the local school boards (for research in the · Recruitment, Information-Consent and Feedback materials - all school boards, see below) labelled Survey materials, including Mass Testing Scales, and stimulus appendices - all labelled · Research Proposal, reviewed and approved by your faculty supervisor The review process takes anywhere from 3 to 5 weeks depending on the nature of the research and the volume of applications already under review by the ORE. Notification of Full Ethics Clearance will be emailed to you and your supervisor. A signed copy of the Full Ethics Clearance Certificate is sent by regular mail to your supervisor. Further details about the REG can be found on the REG website. • To observe children in the Step 1. The project must receive initial approval by the ECEC Director (PAS Early Childhood Education 1039; Ext. 33904). The student researcher should arrange a meeting with Centre (ECEC) in the the ECEC Director to discuss the details of the project and to obtain a Psychology Department at UW copy of the 'Early Childhood Education Centre Guidelines for Researchers'. (no interaction) To interact with the children, Step 2. If the ECEC Director approves the researcher's request, the the children's parents, and/or researcher then completes and submits a research ethics application using the teachers in the ECEC in the ORE online application system, and also submits 2 signed paper copies the Psychology Department at directly to the ORE for ethics review. UW Research to be conducted in the Submit a research ethics application using the ORE online application system, and also submit 2 signed paper copies directly to the ORE for Waterloo School Boards ethics review. The applications submitted to the ORE must include a completed Form 102 specific to the school board to which they are applying. Expect delays in the school board approval process since the meetings to review and approve school-based research typically only occur 4 times per year (e.g., September, November, January, and March). Deadlines for application submission are listed on the web.

Note: All applications to the ORE/Department of Psychology must include:

- Form 101 Online: Create and submit line: http://iris.uwaterloo.ca/ethics/form101
- Form 101 and supporting materials: paper copies
 - · Recruitment Materials
 - REG (Sona Description), COGpool (email/phone scripts), SLC (Flyer)
 - Information/Consent Letter (+ Post-debriefing Consent if deception)
 - Feedback Letter (+ Oral Debriefing if deception)
 - Survey/Questionnaire/Interview items/Stimulus Appendices
 - Research Proposal
- Print and sign 2 (TWO) copies (signed by student and supervisor)
- Submit BOTH copies to DERC mailbox (3rd floor PAS mailroom)

Examples are available from the ORE website for use/modification with individual projects.

Animal Participants in Research

Honours Thesis students must read and understand the University of Waterloo guidelines and procedures for the care and use of animals in research before submitting their applications to the ORE for ethics review and clearance through the Animal Care Committee (ACC). Included in the guidelines is a 'Statement on Animal Use in Research and Teaching at the University of Waterloo'.

An excerpt from that statement is as follows:

"The University of Waterloo is a research intensive institution which supports the responsible use of animals in research for the purpose of obtaining knowledge for the potential benefit to humans and animals. The use of animals for scientific and technical education and training is also supported when no acceptable alternatives exist. The University of Waterloo operates in compliance with all government agencies regulating the use of laboratory animals in research and teaching. Further, the University of Waterloo is proactively committed to the reduction and replacement of animal use and the refinement of procedures in both teaching and research wherever possible.

All research and teaching activities at the University of Waterloo which involve use of live, non-human vertebrate animals must be reviewed and receive ethics clearance by the Animal Care Committee (Committee) before the work can begin. The Committee is multidisciplinary and is comprised of animal researchers, non-animal researchers, community members not associated with the university, animal health technicians and/or laboratory instructors, graduate students and a laboratory animal veterinarian. The Committee meets monthly to review protocols....;"

The steps involved in obtaining ethics clearance for the Honours Theses involving animal participants are the same as those for human participants (above) with the addition of the following:

- 1. complete the on-line 'Animal Utilization Project Proposal' (AUPP),
- 2. obtain the Thesis Supervisor's signature on the paper copy of the AUPP,
- 3. discuss the technical and husbandry requirements of the animals with the Animal Health Technician in the Psychology Department,
- 4. obtais the Departmental Animal Health Technician's signature on the AUPP, and
- 5. obtain the Department Chair's signature on the AUPP.

Other forms associated with the application and review process are on the web.

The student researcher is responsible for forwarding 18 copies of the completed signed AUPP form to the ORE. These will be distributed by the ORE to members of the ACC. Note that the ACC meets once monthly (excluding August) and that the ethics review and approval process normally requires from two to four weeks. Once ethics approval is received, the student researcher will be so informed through his/her Thesis Supervisor and a request for the purchase of the animals can be processed. The student is responsible for the daily (or more often if required) monitoring of the animals once they arrive, and he/she must make arrangements for daily care of the animals with the Animal Health Technician.

Before any work with live animals can begin, and as required by the ACC, the student must successfully complete the online animal research training course. Evidence of successful completion of the program must be included in the AUPP submission.

Equipment and Supplies for Research

A small departmental fund is available to help defray some of the costs incurred by students conducting their thesis research. This fund is to be used specifically for supplies such as printing of questionnaires, envelopes, letterhead, labels, etc., but does not cover expenses such as photocopies of journal articles, printing of the actual thesis, or paying participants. All requests for printing or supplies for Psych 499 should be made to the staff in the Support Services Office (PAS 3017). The fund provides a maximum amount of \$100 support per student.

Evaluation of the Honours Thesis

Thesis Supervisors are given the following guidelines when they are asked to submit a final grade for the

Honours Thesis:

96-100%	An unusually superb thesis, one of the best you have seen in years, involving rare dedication and a tremendous amount of independent work, at the level of a strong graduate student.	
A truly excellent thesis, representing an impressive level of achievement all round (e.g., cleeffective writing throughout; illuminating, correctly reported data analyses; probing, well-infinitroduction and discussion sections), and unusual independence.		
85-89%	A strong thesis, representing a high level of competence overall, but having some specific, nontrivial shortcomings that the student could have rectified; with a fine level of independence.	
80-84%	A good thesis overall, but one that has more major shortcomings than we would typically expect in a strong honours thesis; usually with a modest level of independence.	
75-79%	A just satisfactory thesis, clearly below the level we would typically expect, with serious shortcomings; typically with a relatively low level of independence.	
60-69%	Just barely acceptable as an honours thesis, far below the level we would typically expect, with lots of serious shortcomings and a low level of independence.	

The supervisor may also make comments and criticisms of the thesis in the body of the paper so that the student receives feedback about the strengths and weaknesses of the work presented.

Honours Thesis Award

Each year, the Psychology Department recognizes the achievement of a small number of students who have produced the most outstanding honours theses. Students who have completed particularly strong theses may be nominated for an Honours Thesis Award by their supervisor; then the Psych 499 Course Coordinator considers these nominations to determine the award winners. Typically only theses that have been graded by the end of the third week of May can be considered for an award. The Awards are presented to the recipients at the Psychology Convocation Luncheon in June.

Annual Ontario Psychology Undergraduate Thesis Conference

The Ontario Psychology Undergraduate Thesis Conference provides an informal forum for students to present a summary of their Honours Theses (either orally or in poster format) to a friendly and enthusiastic audience of their peers and to discuss their work with others who have similar interests. *The conference is typically held at the end of April. There is no registration fee for presenters or faculty members and lunch is provided.* Participants report that the event is very worthwhile and enjoyable. Clearly a great way to end fourth year!

The schedule of hosts for the conference for the next few years is as follows:

- 2012 York University
- 2013 University of Guelph-Humber
- 2014 University of Western Ontario (London)

For those interested in participating in the conference, data collection should be completed by March. Note however, that students are not required to present a complete analysis of their results at the conference.

Further details regarding the Honours Thesis Conference (date, location, registration procedures and deadlines, accommodations, etc.) are posted on the Psych 499 website. Please inform the Psychology UG Advisor as soon as possible if you register to attend the conference.

A small fund is available to offset the following costs of participating in the Honours Thesis Conference:

- travel to and from the conference (e.g., gas),
- accommodation for one night (note that accommodation on-campus at the University is preferred; see the above web site for information),
- food (note that the conference typically provides a free buffet lunch; see the above web site for information),
- and costs (if applicable) associated with poster boards for those doing poster presentations.

Please submit your application for financial assistance for participating in the Thesis Conference in writing to Janice da Silva, the Psychology Administrative Officer (PAS 3019, janice.dasilva@uwaterloo.ca) at least 3 weeks prior to the date of the conference. Please include:

- State the Request (e.g., Financial Assistance to Attend the Honours Thesis Conference)
- · date request submitted
- name
- ID#
- contact information [home and local address, phone number(s), e-mail address]
- name of your Thesis Supervisor, and
- estimated expenses (see above for the allowable expenses).

You will be informed by e-mail before the conference as to whether or not your budget request has been

approved. Please obtain receipts for the approved expenses because receipts will be required before a reimbursement can be processed. **Note that funding to participate in the thesis conference is only available for those attending the conference prior to graduation.**

AVOID ACADEMIC OFFENCES

Failing to adhere to established standards in the conduct of research is a serious offence. Please refer to "Obtaining Ethics Clearance for Research" above for further details.

Students should also familiarize themselves with Policy 71 (Student Academic Discipline Policy) as well as the advice from the Faculty of Arts regarding avoiding academic offences.

COMPUTING FACILITIES

Please check the Information Systems & Technology (IST) Department web site for information regarding setting up your UW computer account, accessing the Internet, costs for laser printing, accessing your account from off-campus, etc. If you are enrolled in the Faculty of Arts, please also check the Arts Computing Office web site for information.

The UW computer accounts give students free access to applications such as word processing, statistical and graphics packages, spreadsheets, and electronic mail. Students also have access to the Internet which allows them to use the UW Electronic Library including the electronic journal article databases. Students are charged for printing and can put money for printing on to their resource account at various locations across campus including PAS 1080 using their WATCARD.

It is critical that the University (e.g., administration, instructors, academic advisors, etc.) can reach you reliably by e-mail (e.g., regarding academic standing, degree requirements, deadlines, etc.). If you are using a web e-mail account such as hotmail or yahoo, we strongly encourage you to consider using a more reliable e-mail account such as your UW account. Your UW account is just as easy to use from off-campus as other free web accounts but is more secure. You can access the UW account from the "mywaterloo" website.

If you are using an e-mail address other than your UW e-mail address, you should do one of the following two things:

- change the e-mail address that you want posted on the University Directory, or
- activate your UW account and arrange for the e-mail from your UW account to be forwarded to your alternate e-mail address. The alternate e-mail address will not appear on the University Directory.

GRADUATION

Intent to Graduate Forms and general convocation information is available on the Registrar's Office website. Students who want to graduate in June must submit an Intent to Graduate Form to the Registrar's Office before March 1. The deadline to apply for the October convocation is August 1. Students who apply to graduate, but do not complete their Honours Theses in time to graduate at the preferred convocation must submit another Intent to Graduate Form for the next convocation.

Those who plan to submit their thesis for marking beyond the end of the examination period for the Psych 499C term should refer to "Extensions on the Thesis Submission Deadline" for further details regarding graduation deadlines

CONTACTS

Office of Research Ethics:			
Inquiries about obtaining ethics clearance for studies involving human participants should be directed to:	Jacqueline Malonda Research Ethics Officer NH 1024 Ph 519.888.4567 Ext 35217 E-mail jmalonda@uwaterloo.ca		
	Cindy Futher Animal Research Coordinator NH 1025 Ph 519.888.4567 Ext. 35278 E-Mail cfuther@uwaterloo.ca		

Inquiries about obtaining ethics clearance for research studies involving animals should be directed to:	OR Dr. Susan Sykes Director, Office of Research Ethics NH 1026 Ph 519.888.4567 Ext. 36005 E-mail ssykes@uwaterloo.ca
Psychology Department:	
Psych 499 Course Coordinator	Dr. Dan Smilek PAS 4051 (519) 888.4567 ext 35365 E-mail: dsmilek@uwaterloo.ca
Psych Undergraduate Advisor and Program Administrator	Heather Smith PAS 4005 (519) 888.4567 ext 32819 E-mail: hsmith@uwaterloo.ca
HRM Advisor and Psych Undergraduate Assistant	Theresa Bauer PAS 4053 (519) 888.4567 ext 36535 E-mail: tbauer@uwaterloo.ca
Psych Undergraduate Website	click here
Psychology Department	Department Fax: (519) 746-8631 Department website



Psychology Department University of Waterloo 200 University Avenue West Waterloo, Ontario, Canada N2L 3G1 519 888 4567

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