FOR APPROVAL

TO: Arts & Science Council

SPONSOR: Dwayne Benjamin, Vice-Dean, Graduate Education

CONTACT INFO: vicedeangraduate.artsci@utoronto.ca

DATE: February 5, 2020 for February 12, 2020

AGENDA ITEM: 5

ITEM OF BUSINESS:
Proposal establish a direct-entry option in the Department of Psychology’s PhD program

JURISDICTIONAL INFORMATION:
The Arts & Science Council has delegated authority to approve major modifications that are defined in the University of Toronto Quality Assurance Process (UTQAP), including the addition of a direct-entry option to existing doctoral programs.

GOVERNANCE PATH:
1. Graduate Curriculum Committee – February 3, 2020 (for approval)
2. Arts & Science Council – February 12, 2020 (final approval)
3. Office of the Vice-Provost, Academic Programs (for information), in turn reported to the Committee on Academic Policy & Programs (for information) – May 6, 2020

The Office of the Vice-Provost, Academic Programs will also report this major modification to the Ontario Universities Council on Quality Assurance in the summer of 2020.

HIGHLIGHTS:
The Department of Psychology proposes to add a direct entry (five year) option to its existing doctoral program, allowing qualified students to be admitted into this option based on the completion of an appropriate bachelor’s degree. The direct entry option will include the regular PhD program requirements and a foundational research project to be completed in the first two years of the program, as well as additional coursework.

In the discipline of Psychology, the PhD is viewed as the criterion for academic and many non-academic jobs. Currently, over 90% of the department’s Master’s students progress into the PhD program annually; the MA is not intended to be a terminal degree program. The establishment of a direct-entry option will bring the program into alignment with many other top Psychology programs in North America. It will also make more effective use of the five-year timespan to engage in doctoral-
level work. Students will have more time to complete coursework, including skills-based course modules, and to develop and complete a more significant initial research project. The department intends to admit the majority of its applicants into the direct entry PhD option; those applicants with an eligible Master’s degree will continue to be admitted into the existing four-year PhD program.

This proposal also includes the addition of new course modules to the PhD program (both the four year and direct entry option), as well as minor changes to existing courses and program area names.

**MOTION:**

a) THAT the proposed changes to the Doctor of Philosophy (PhD) in Psychology as described in the attached proposal dated January 29, 2020 be approved effective the 2020-21 academic year.
1 Summary

- Please provide a brief summary of the change(s) being proposed as it relates to the current structure of the program.

Two changes are proposed. The first is to add a Direct Entry option to the Psychology PhD program to allow students to be admitted to the program without having first completed a Master’s degree. The direct entry option will include the regular PhD program requirements and in addition students will take a foundational research project to be completed in the first two years of the program (PSY 1100H); these requirements are detailed in full below.

The second change is to add 0.25 FCE course modules to both the existing four-year PhD program and proposed Direct Entry PhD option. We are also proposing additional minor changes to existing courses that are shared between the MA and PhD programs (e.g., course renamings). These are described in the proposal.
2 Effective Date

September 2021. The Direct Entry option would be added to the Psychology Department website in September, 2020 in time for applications and recruitment (Winter, 2021). The first class of Direct Entry students would start September, 2021.

3 Academic Rationale

- What are the academic reasons for the change proposed, and how do they fit with the unit’s and division’s academic plans?

Direct Entry Option

Psychology is unusual in that the vast majority of students do not terminate their studies after the Master’s degree but instead complete the PhD. Indeed, over 90% of our MA students progress into the PhD program. Our Master’s degree was never intended to serve as a terminal Master’s degree and was intended to culminate in students progressing into our four-year Doctoral program. This is clearly communicated to prospective students in our SGS calendar entry, and on our website.

In the discipline of Psychology the PhD is viewed as the criterion for both academic and many non-academic jobs. Thus, in alignment with other top Psychology programs in North America, we propose to add a Direct Entry PhD option.

The Direct Entry option that we propose will make more effective use of the 5-year timespan to engage in Doctoral-level work. This is because there will be more time to complete course-work, including new skills-based course modules (see below, Section 4, and Appendix B), and time to develop and complete a more significant initial research project, the Foundational Research Project (see Section 4 and Appendix B for details).

It should be noted that the vast majority of Arts and Science graduate programs already have a Direct Entry PhD option. Thus, adding one to Psychology brings Psychology’s graduate program into alignment with other A&S units.

Adding 0.25 FCE Courses to Calendar

In addition to our existing 0.5 FCE courses, we propose to add approximately two to four 0.25 FCE course modules per year to both our existing four-year PhD program and proposed Direct Entry option. Offering shorter-term modules (i.e., six-week rather than 12-week courses) provides the opportunity to give students in-depth training on topics that do not fit within a 12-week timeframe. Our focus for these modules would be on offering more skills-based training, so that students have opportunities to expand their skillsets. For example, a 6-week course module on a statistical technique such as Power Analyses or on a beginner or
A more advanced module on a programming language such as R or Python would provide students the opportunity to learn psychological science skills that are not offered in their home laboratories or in our existing 0.5 FCE courses. We plan on offering different modules across our teaching cycle and students would be allowed to take two 0.25 FCE skills modules in lieu of one 0.5 FCE course.

Offering course modules will provide Psychology students with greater flexibility to customize their graduate training, thus enabling them to better meet their career (both academic and non-academic) objectives.

4 Description of the Proposed Major Modification(s)

- Please describe in detail what changes are being proposed. Major modifications include changes to the program requirements that will significantly change what students will know and be able to do when they complete the program.
- Other major modifications that may be included are significant changes to admissions requirements, significant changes to faculty engaged in program and; a change to mode of delivery, change to the language of the program and offering the program at another location or institution.
- Please be explicit about how the learning outcomes have changed and include both previous and proposed learning outcomes or one version of the current learning outcomes with the new learning outcome in track changes. You may wish to use Appendices A and B.
- Describe how the modification reflects universal design principles and/or how the potential need to provide mental or physical health accommodations has been considered in the development of this modification.
- Please provide calendar copy, either in track changes or as two separate documents in appendices C and D as applicable.

Direct Entry Option - Overview

We will use the same admissions criteria for the proposed Direct Entry option as we have for the Master’s and existing Doctoral programs. Please see Appendices C and D for the admission criteria.

Because we already have strong admissions criteria, we believe those will be appropriate for the Direct Entry PhD option. These criteria also align with the School of Graduate Studies admission requirements for Direct Entry programs. We intend to admit the majority of our students into the Direct Entry PhD option (approximately 28-30 PhD students per annum). Those applicants with an eligible Master’s degree will continue to be admitted into the existing four-year PhD program.
Please see Appendices A and B regarding learning outcomes.

As indicated in Appendices C and D, the Direct Entry PhD option will differ from the existing 4-year Doctoral program in several ways. The full suite of program requirements for Direct Entry students, as well as requirements common to both the Direct Entry and the four-year option are described below, along with proposed changes to existing practice (see also Table 1, below). In short, however, the program requirements specific to the Direct Entry option are as follows:

- PSY 2001H, an introductory statistics course (also a requirement of the MA program; 0.5 FCE);
- PSY 1100H: Foundational Research Project (0.5 FCE);
- An additional 1.0 FCE in Psychology content courses.

Compared to the proposed requirements for the regular entry PhD, the required number of courses taken by Direct Entry students will be greater by 2.0 FCEs. This difference represents the requirements for the MA degree, which consist of 2.0 FCEs.

Program Requirements Specific to the Direct Entry Option – Detailed Description

Statistics courses (PSY2001H and PSY2002H): The courses will be renamed to better reflect the content and will now be called PSY2001H: Statistics I (current title: Design of Experiments I) and PSY2002H: Statistics II (current title: Design of Experiments II). Direct entry students will take both statistics courses in Year 1 (students in the four-year option will take PSY 2002H only). This is different from the existing MA/PhD program where students take PSY2001 in the MA year and PSY2002 in the PhD1 year. A recent review of the quantitative training in our program revealed that both students and faculty would prefer that students develop their quantitative skills as early as possible, so that they can use those quantitative skills on their Foundational Research Project that begins in Year 1 of the Direct Entry option (see below for details).

*Note that these course name changes apply to the MA and existing PhD programs, too.

Foundational Research Project (PSY1100H, 0.5 FCE): Students will work on their first research project in Psychology across the first two years they are in the Direct Entry PhD option. Letter grades will be used for PSY1100H. In Year 1, they will form a 3-member faculty committee and develop their proposal. Students will defend the proposed project and complete a mini orals reading list exam in Year 1. They will then engage in data collection over the summer and through the fall of Year 2. They will write up and defend their Foundational Research Project in Year 2. Unlike the MA thesis in the existing program, the Foundational Research Project will give students the time to develop the knowledge and skills they will need to complete a more ambitious research project that could eventually be part of their doctoral dissertation.
Psychology content courses: Students in the Direct Entry option will be required to complete 1.0 FCEs in Year 2 and 1.0 FCEs in Year 3. No content courses are required in Year 1 in order to spread out the workload so students can focus on their Foundational Research Project, their statistics courses, and their scholarship applications. A student may take a content course in Year 1 if they wish to do so.

Proposed Changes to Program Requirements Common to the Direct Entry and Four-Year PhD

Professional Psychology (PSY3001H): This 0.5 FCE professional development course will be broken into two 0.25 FCE modules. The first 6-week module will be offered in Year 1 and will focus on early career topics, such as research ethics, open science practices, designing conference posters, applying for scholarships, and oral and written communication. The second 6-week module will be offered in Year 3 and will focus on later career topics, such as dissertations, applying for postdoctoral fellowships, and applying for academic and non-academic jobs. Professional Psychology will still be a credit/no credit course, and credit will be awarded after completion of the second module. Breaking this course into two modules will allow the flexibility needed to cover topics that students need and want to learn about at more appropriate stages of their graduate training.

Psychological Science Skills (PSY3100H): A new course code will be added to the calendar for both the Direct Entry and existing 4-year PhD programs. This course code will be used for 0.25 FCE modules and consist of 6-week courses that focus on psychological science skills. It will follow a ‘special topics’ model where separate meeting sections (e.g., L0101, L0201, etc) are created for each particular module and subtitles are added on ROSI. Students can take two of these 0.25 skills modules in lieu of one 0.5 FCE psychology content course (i.e., traditional seminar course). Examples of skills modules could be a 6-week module on either beginner or advanced programming in languages such as R or Python, or more specific statistical techniques such as power analysis. One of the recommendations arising from our recent UTQAP was to add skills modules so that students have a greater array of skills that they can use in their research and that will enhance their applications to both academic and non-academic jobs.

PSY3000 will be renamed the External Research Project (currently Research Project in Psychology) in order to better reflect the fact that students complete this project in a lab outside of their home lab. It will remain a 0.5 FCE course and all other aspects remain the same.

PSY4000 will be renamed Doctoral Research Project (currently Specialization Study) in order to better reflect the project that students are working on. This course is intended to track the doctoral work leading up to the dissertation and is credit/no credit. It will remain a 0.5 FCE course and all other aspects remain the same.

The above program changes (new course additions, changes to existing courses) are also summarized in the table below (please see Appendix E for full course details):
Table 1: Summary of Proposed New Courses and Changes to Existing Courses

<table>
<thead>
<tr>
<th>Type of Change</th>
<th>Course Code</th>
<th>Title</th>
<th>Weight</th>
<th>Required of</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Courses</td>
<td>PSY 1100H</td>
<td>Foundational Research Project</td>
<td>0.5 FCE</td>
<td>Direct Entry students</td>
</tr>
<tr>
<td></td>
<td>PSY 3100H</td>
<td>Psychological Science Skills (various modules)</td>
<td>0.25 FCE</td>
<td>All PhD students</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(optional 0.5</td>
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<td></td>
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<td></td>
<td>FCE broken into</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>two 0.25 FCEs)</td>
<td></td>
</tr>
<tr>
<td>Course Renaming</td>
<td>PSY 2001H</td>
<td>Current: Design of Experiments I</td>
<td>0.5 FCE</td>
<td>Direct-Entry students*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proposed: Statistics I</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>PSY 2002H</td>
<td>Current: Design of Experiments II</td>
<td>0.5 FCE</td>
<td>All PhD students</td>
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<tr>
<td></td>
<td></td>
<td>Proposed: Statistics II</td>
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<tr>
<td></td>
<td>PSY 3000H</td>
<td>Current: Research Project in Psychology</td>
<td>0.5 FCE</td>
<td>All PhD students</td>
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<td></td>
<td></td>
<td>Proposed: External Research Project</td>
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<tr>
<td></td>
<td>PSY 4000H</td>
<td>Current: Specialization Study</td>
<td>0.5 FCE</td>
<td>All PhD students</td>
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<tr>
<td></td>
<td></td>
<td>Proposed: Doctoral Research Project</td>
<td></td>
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</tr>
<tr>
<td>Splitting a Course</td>
<td>PSY 3001H</td>
<td>Professional Psychology</td>
<td>Two 0.25 FCEs</td>
<td>All PhD students</td>
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<tr>
<td></td>
<td></td>
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<td>modules</td>
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</table>

*students in the four-year program will have completed this course, or an equivalent course, during their Master’s year.
Change to Area Names

The names of two of the areas in the Psychology graduate program will be updated and this change will apply to both the MA/PhD and Direct Entry PhD programs. This update is based on extensive consultations with faculty and on changes in area nomenclature within our discipline. These changes will be reflected in the SGS overview of our program calendar copy [https://sgs.calendar.utoronto.ca/degree/Psychology](https://sgs.calendar.utoronto.ca/degree/Psychology). The four area names will be:

- Behavioural Neuroscience (formerly Biology and Behaviour)
- Perception, Cognition, and Cognitive Neuroscience
- Development
- Social and Personality (formerly Social, Personality, and Abnormal)

5 Impact of the Change on Students

- Outline the expected impact on continuing students, if any, and how they will be accommodated.
- Please detail any consultation with students.

Direct Entry Option

This change will have no impact on continuing students. For future students, direct entry admission will be offered to all students with a Bachelor’s degree who meet our existing admissions criteria. Those applicants with a suitable Master’s degree will be admitted to our existing four-year PhD program (with the changes noted above), which is what occurs now.

Current students would only be affected by the proposed course name changes as well as by gaining the opportunity to take the PSY3001H Psychological Science Skills modules as well as the modular form of PSY3000H Professional Psychology. Thus, current students will also benefit from the opportunity to expand their skillsets and to take professional development modules at times that better fit their progression in the graduate program.

Consultation with Students

The Graduate Chair, Graduate Director, and Graduate Administrator met with current graduate students from all 3 campuses and research hospitals and institutes both in Fall 2018 and Fall 2019 to discuss the proposed Direct Entry PhD option. As well, the Graduate Committee includes two graduate student representatives who have been part of the consultation process. Current graduate students were supportive of the proposed changes (see below for more details). Their only concern regarded the exit mechanism and
opportunity to back transfer to an MA if students do not progress in the Direct Entry PhD option.

*Mental health accommodations:* The UTQAP and subsequent follow-up consultations with both current graduate students and with faculty from all campuses revealed that all parties find the single MA year to be quite stressful. The current MA year requires completion of the first statistics course (PSY2001H), two content courses, and the MA thesis. Students are also TAing and completing scholarship applications. Because of the workload and one-year timeframe, both students and faculty feel that the MA year does not provide enough time to do a more substantive research project that is more reflective of graduate-level research. The design of the Direct Entry PhD option accounts for these concerns by spreading the required coursework across the first three years. In particular, the amount of required coursework is reduced in Year 1. As well, the timeline for the PSY1100H Foundational Research Project spans two years, which allows students to develop a more substantive project that may more easily relate to their later dissertation research. Current students who reviewed this Direct Entry PhD proposal agree that these changes will be beneficial to student mental health and well-being.

### 6 Consultation

- Describe the impact of the major modification on other programs and any consultation undertaken with the Dean and chair/director of relevant academic units.

These modifications will not affect other units.

Extensive consultation was done, including multiple Graduate Committee meetings, a faculty retreat, campus visit consultations across two years, and multiple meetings with the Vice-Dean, Graduate. Faculty were supportive of the proposed changes, including moving both statistics courses to Year 1 and renaming them, the Foundational Research Project, the Psychological Science Skills modules, and teaching Professional Psychology in a modular format. Their only concern regarded the exit mechanism and opportunity to back transfer to an MA if students do not progress in the Direct Entry PhD option.

### 7 Resources

- Describe any resource implications of the change(s) including, but not limited to, faculty complement, space, libraries and enrolment/admissions.
- Please be specific where this may impact significant enrolment agreements with the Faculty/Provost’s office.
Major Modification Proposal: Significant Modifications to Existing Graduate and Undergraduate Programs

- Indicate if the major modification will affect any existing agreements with other institutions, or will require the creation of a new agreement to facilitate the major modification (e.g., Memorandum of Understanding, Memorandum of Agreement, etc). Please consult with the Provost’s office (vp.academicprograms@utoronto.ca) regarding any implications to existing or new agreements.

**Direct Entry Option**

The resource implications of this change are negligible. Our intention is to continue with our current rate of admissions (estimated to be 28-30 PhD students per year), except that students with only a Bachelor’s degree will now be admitted to the Direct Entry PhD option. No other resources are needed to accommodate this change, because it has always been the case in our department that MA and PhD students take the same courses, with the exception of PSY1000 Directed Studies. PSY1000 is the MA thesis and is overseen by the faculty supervisor. No additional instructors are required.

Our faculty teaching schedule will remain the same but will now include the option for faculty to teach two 0.25 FCE modules instead of a 0.5 FCE course. Given the large size of our graduate faculty complement (which includes over 90 FTEs at the three campuses and approximately 40 status-only and cross-appointees), we are well-equipped to cover the addition of skills-based modules.

8 UTQAP Process

The UTQAP pathway is summarized in the table below.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development/consultation within unit</td>
<td>Fall 2018 - Fall 2019</td>
</tr>
<tr>
<td>Consultation with Dean’s office (and VPAP)</td>
<td>Fall 2019</td>
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<td></td>
<td>Psychology Graduate Committee, November 2019</td>
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<tr>
<td>Faculty/divisional council</td>
<td>A&amp;S Council, February 12, 2020</td>
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<tr>
<td>Provost’s office Sign-off</td>
<td>January 20, 2020</td>
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<td>Reported to the Provost and included in annual report to AP&amp;P</td>
<td>July 2020</td>
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<td>Ontario Quality Council—reported annually</td>
<td>Summer 2020</td>
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Developed by the Office of the Vice-Provost, Academic Programs
Template last updated March 2, 2017
Appendix A: Current Learning Outcomes, and Degree-Level Expectations

Address how the design, structure, requirements and delivery of the program support the program learning outcomes and degree-level expectations.

<table>
<thead>
<tr>
<th>DOCTORAL Degree-Level Expectations</th>
<th>DOCTORAL Program Learning Outcomes</th>
<th>How the Program Design/Structure Supports the Degree-Level Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Depth and Breadth of Knowledge</td>
<td>Depth and breadth of knowledge is defined in the Ph.D. Program in Psychology in a manner that builds directly on M.A.-level expectations. This includes the demonstration of an in-depth and comprehensive understanding of major concepts, theoretical perspectives, and empirical findings within the student’s research area, and a demonstrated ability to integrate that knowledge within a broader disciplinary and/or interdisciplinary framework. In addition, demonstrated proficiency in the application of that knowledge to an interpretation of one's own original research findings. This preparation is reflected in students who are able to integrate knowledge acquired in a particular research domain within a broader disciplinary and/or interdisciplinary framework.</td>
<td>The program design and requirement elements that ensure these student outcomes for depth and breadth of knowledge are: 1. Thesis research (including written proposal, final written thesis, and oral defense); 2. Outside Project 3. Elective seminar courses 4. Advanced statistics 5. A reading list exam</td>
</tr>
<tr>
<td>2. Research and Scholarship</td>
<td>Research and Scholarship is defined in the Ph.D. in Program in Psychology in a manner that builds directly on M.A.-level expectations. This includes the demonstration of the advanced understanding of</td>
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knowledge, applications, or improvements in understanding at the forefront of the discipline, and to adjust the research design or methodology in light of unforeseen problems; b. The ability to make informed judgments on complex issues in specialist fields, sometimes requiring new methods; and c. The ability to produce original research, or other advanced scholarship, of a quality to satisfy peer review, and to merit publication.

| knowledge, applications, or improvements in understanding at the forefront of the discipline, and to adjust the research design or methodology in light of unforeseen problems; b. The ability to make informed judgments on complex issues in specialist fields, sometimes requiring new methods; and c. The ability to produce original research, or other advanced scholarship, of a quality to satisfy peer review, and to merit publication. | disciplinary research practices and analytical techniques, and the advanced application of those skills to a relevant research problem, including any specialized analytical and/or computational skills relevant to the student’s work. In addition, demonstrated autonomy in the design, execution, analysis, and interpretation of an original program of research. This knowledge and set of skills is reflected in students who are able to critically analyze and synthesize a body of empirical work leading to a rationale for an original research problem, to acquire the necessary skill set to execute a program of research, to exercise initiative and leadership to this end, and to see the work to completion, including submitting it for peer review and publication. | 4. Preparation of research findings for publication in peer reviewed journals, and presentation of work at scientific meetings. |

3. **Level of Application of Knowledge**

The capacity to i) Undertake pure and/or applied research at an advanced level; and ii) Contribute to the development of academic or professional skills, techniques, tools, practices, ideas, theories, approaches, and/or materials.

| The capacity to i) Undertake pure and/or applied research at an advanced level; and ii) Contribute to the development of academic or professional skills, techniques, tools, practices, ideas, theories, approaches, and/or materials. | Level of Application of Knowledge is defined in the Ph.D. Program in Psychology as the demonstration of a deep level of knowledge and understanding, within a broadly defined research area, and as reflected in the ability to develop and shape an original program of research and incorporate appropriate methods and techniques to that end. In addition, a demonstrated ability to translate these competencies into scholarly communications, both in the form of publishable manuscripts and presentations at scientific meetings. | The program design and requirements that ensure these student outcomes for research and scholarship are:
1. Thesis research (including a written proposal, final written thesis, and oral defense);
2. Outside Project.
3. Advanced statistics requirement
4. Preparation of findings for publication in peer reviewed journals, and presentation of work at scientific meetings.
5. An expectation that the student will take leadership and ownership in acquiring the skills necessary to carry out their program of research, including attending workshops and seminars on topics that will expand their skillset.
6. Supervisory committee meetings. |
4. **Professional Capacity/Autonomy**  
   a. The qualities and transferable skills necessary for employment, requiring the exercise of personal responsibility and largely autonomous initiative in complex situations; b. The intellectual independence to be academically and professionally engaged and current; c. The ethical behavior consistent with academic integrity and the use of appropriate guidelines and procedures for responsible conduct of research; and d. The ability to evaluate the broader implications of applying knowledge to particular contexts.

   **Professional Capacity/Autonomy** is defined in the Ph.D. Program in Psychology as, in addition to and building on M.A.-level expectations, the demonstration of initiative and independence in engaging in the academic and professional activities necessary to shape ones professional development and career trajectory, and to do so in a manner that reflects an understanding of institutional and departmental values of academic integrity, research ethics and best practices. This level of expertise is reflected in students who exercise initiative and autonomy in carrying out their research and graduate training activities more generally, who seek out opportunities to develop their professional and research skills and to disseminate their findings, and who engage in leadership opportunities relating to their graduate training experience.

   The program design and requirements that ensure these student outcomes for professional capacity/autonomy are:  
   1. Course in Professional Psychology. Students take this course in Ph.D.1.  
   2. Encouragement to participate in mentorship/leadership opportunities within labs and/or the department (e.g., undergraduate supervision, student-led initiatives, student representation on committees).  
   3. Required training in university and/or tri-council policies governing research with human and/or animals subjects, as relevant to the student’s program of research.

5. **Level of Communication Skills**  
   The ability to communicate complex and/or ambiguous ideas, issues, and conclusions clearly and effectively.

   **Level of Communications Skills** is defined in the Ph.D. Program in Psychology as the demonstration of communication competencies that build from the M.A. on an increasingly in-depth and sophisticated proficiency in articulating arguments that are grounded in theory, and that reflect a keen acknowledgement of inconsistencies.

   The program design and requirements that ensure these student outcomes for level of communication skills are:  
   1. Elective seminar courses  
   2. Thesis research (including written proposal, final written thesis, and oral defense)  
   3. Opportunities to give presentations in lab meetings and/or area group meetings, and encouragement to present results at scientific meetings  
   4. Preparation of research findings for publication in peer-reviewed journals  
   5. Supervisory committee meetings
controversies, and ambiguities in the field. This ability to communicate is reflected in students who can write and give oral presentations that demonstrate skill and proficiency in critical thinking, and who can produce a quality of work that would hold up to peer review merit publication.

<table>
<thead>
<tr>
<th>6. Awareness of Limits of Knowledge</th>
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<tbody>
<tr>
<td>An appreciation of the limitations of one's own work and discipline, of the complexity of knowledge, and of the potential contributions of other interpretations, methods, and disciplines.</td>
</tr>
<tr>
<td>Competence in the research process by applying an existing body of knowledge in the critical analysis of a new question or of a specific problem or issue in a new setting.</td>
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</tbody>
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<td>1. Elective seminar courses</td>
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<td>2. Supervisory committee meetings</td>
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<tr>
<td>3. Reading list exam defense</td>
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<tr>
<td>4. Dissertation defense</td>
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## Appendix B: Proposed Learning Outcomes, and Degree-Level Expectations

Address how the design, structure, requirements, and delivery of the program support the program learning outcomes and degree-level expectations.

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<tr>
<td>1. Depth and Breadth of Knowledge</td>
<td>Depth and breadth of knowledge is defined in the four-year Ph.D. Program in Psychology in a manner that builds directly on M.A.-level expectations. For the Direct Entry Ph.D. option, depth and breadth of knowledge will also build cumulatively as students progress from Year 1 onward. <strong>The definition for both Ph.D programs</strong> includes the demonstration of an in-depth and comprehensive understanding of major concepts, theoretical perspectives, and empirical findings within the student’s research area, and a demonstrated ability to integrate that knowledge within a broader disciplinary and/or interdisciplinary framework. In addition, demonstrated proficiency in the application of that knowledge to an interpretation of one’s own original research findings. This preparation is reflected in students who are able to integrate knowledge acquired in a particular research domain within a broader disciplinary and/or interdisciplinary framework.</td>
<td>The program design and requirement elements that ensure these student outcomes for depth and breadth of knowledge are <strong>similar for the four-year Ph.D</strong> and <strong>Direct Entry Ph.D</strong>: 1. Thesis research (including written proposal, final written thesis, and oral defense); 2. Outside Research Project 3. Elective seminar courses and Psychological Science Skills modules 4. Advanced statistics 5. A reading list exam 6. Direct Entry Ph.D: Foundational Research Project in Years 1 and 2</td>
</tr>
<tr>
<td>2. Research and Scholarship</td>
<td>Research and Scholarship is defined in the four-year Ph.D. Program in</td>
<td>The program design and requirements that ensure these student outcomes for research and scholarship are:</td>
</tr>
</tbody>
</table>

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| a. The ability to conceptualize, design, and implement research for the generation of new knowledge, applications, or improvements in understanding at the forefront of the discipline, and to adjust the research design or methodology in light of unforeseen problems; b. The ability to make informed judgments on complex issues in specialist fields, sometimes requiring new methods; and c. The ability to produce original research, or other advanced scholarship, of a quality to satisfy peer review, and to merit publication. | Psychology in a manner that builds directly on M.A.-level expectations. For the Direct Entry PhD option, research and scholarship will also build cumulatively as students progress from Year 1 onward. The definition for both PhD programs. This includes the demonstration of the advanced understanding of disciplinary research practices and analytical techniques, and the advanced application of those skills to a relevant research problem, including any specialized analytical and/or computational skills relevant to the student's work. In addition, demonstrated autonomy in the design, execution, analysis, and interpretation of an original program of research. This knowledge and set of skills is reflected in students who are able to critically analyze and synthesize a body of empirical work leading to a rationale for an original research problem, to acquire the necessary skill set to execute a program of research, to exercise initiative and leadership to this end, and to see the work to completion, including submitting it for peer review and publication. | 1. Thesis research (including a written proposal, final written thesis, and oral defense) 2. Outside Research project 3. Advanced statistics requirement 4. Psychological Science Skills modules 5. Preparation of research findings for publication in peer reviewed journals, and presentation of work at scientific meetings. 6. Direct Entry PhD: Foundational Research Project in Years 1 and 2 |

| 3. Level of Application of Knowledge | Level of Application of Knowledge is defined in both the four-year Ph.D. and Direct Entry PhD Programs in Psychology as the demonstration of a deep level of knowledge and understanding, within a broadly defined research |

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| academic or professional skills, techniques, tools, practices, ideas, theories, approaches, and/or materials. | area, and as reflected in the ability to develop and shape an original program of research and incorporate appropriate methods and techniques to that end. In addition, a demonstrated ability to translate these competencies into scholarly communications, both in the form of publishable manuscripts and presentations at scientific meetings. | 4. Preparation of findings for publication in peer reviewed journals, and presentation of work at scientific meetings.  
5. An expectation that the student will take leadership and ownership in acquiring the skills necessary to carry out their program of research, including attending workshops and seminars on topics that will expand their skillset.  
6. Supervisory committee meetings. |
|---|---|---|
| 4. Professional Capacity/Autonomy | Professional Capacity/Autonomy is defined in the four-year Ph.D. Program in Psychology in a manner that builds on M.A.-level expectations. For the Direct Entry PhD option, professional capacity/autonomy will also build cumulatively as students progress from Year 1 onward. The definition for both PhD programs includes, the demonstration of initiative and independence in engaging in the academic and professional activities necessary to shape one's professional development and career trajectory, and to do so in a manner that reflects an understanding of institutional and departmental values of academic integrity, and research ethics and best practices. This level of expertise is reflected in students who exercise initiative and autonomy in carrying out their research and graduate training activities more generally, who seek out opportunities | The program design and requirements that ensure these student outcomes for professional capacity/autonomy are:  
1. Course in Professional Psychology. Students will take Module I in their first year in either the existing four-year PhD or Direct Entry PhD programs and take Module II in the third year of their program.  
2. Encouragement to participate in mentorship/leadership opportunities within labs and/or the department (e.g., undergraduate supervision, student-led initiatives, student representation on committees).  
3. Required training in university and/or tri-council policies governing research with human and/or animals subjects, as relevant to the student’s program of research. |
### 5. Level of Communication Skills

The ability to communicate complex and/or ambiguous ideas, issues, and conclusions clearly and effectively.

Level of Communications Skills is defined in the four-year Ph.D. Program in Psychology as the demonstration of communication competencies that build from the M.A. For the Direct Entry PhD option, professional communication skills will also build cumulatively as students progress from Year 1 onward. The definition for both PhD programs includes an increasingly in-depth and sophisticated proficiency in articulating arguments that are grounded in theory, and that reflect a keen acknowledgement of inconsistencies, controversies, and ambiguities in the field. This ability to communicate is reflected in students who can write and give oral presentations that demonstrate skill and proficiency in critical thinking, and who can produce a quality of work that would hold up to peer review merit publication.

The program design and requirements that ensure these student outcomes for level of communication skills are:
1. Elective seminar courses
2. Thesis research (including written proposal, final written thesis, and oral defense)
3. Opportunities to give presentations in lab meetings and/or area group meetings, and encouragement to present results at scientific meetings
4. Preparation of research findings for publication in peer-reviewed journals
5. Supervisory committee meetings

#### 6. Direct Entry PhD: Foundational Research Project

### 6. Awareness of Limits of Knowledge

An appreciation of the limitations of one’s own work and discipline, of the complexity of

Level of Awareness of Limits of Knowledge is defined in both the existing four-year the Ph.D. and Direct Entry PhD Programs in Psychology as:

The program design and requirements that ensure these student outcomes for awareness of limits of knowledge are:
1. Elective seminar courses
2. Supervisory committee meetings
3. Reading list exam defense
4. Dissertation defense
| Knowledge, and of the potential contributions of other interpretations, methods, and disciplines. | An appreciation of the limitations of one’s own work and discipline, of the complexity of knowledge, and of the potential contributions of other interpretations, methods and disciplines. | 5. Direct Entry PhD: Foundational Research Project |
Appendix C: Current Calendar Copy

Doctor of Philosophy

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Psychology's additional admission requirements stated below.
- Appropriate University of Toronto master's degree, or its equivalent from a recognized university, with a minimum A– average and adequate research performance.

Program Requirements

- Minimum of two years of residence beyond the master's degree, but usually takes at least three years. Applicants with a master's degree from another university may be required to enrol in a three-year residence program, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.
- Individual programs of study are planned and include continuing research training with staff members. There is no language requirement.
- PSY 3000H\(^0\) *Research Project in Psychology*, usually taken in PhD 1. This is a research project course supervised by a faculty member other than the student's PhD supervisor. It is a one-session course spread over PhD 1.
- PSY 3001H *Scientific and Professional Psychology*, usually taken in PhD 1.
- An advanced statistics course chosen from a list provided by the department (typically PSY 2002H *Design of Experiments II*, usually taken in PhD 1).
- Two half course Psychology electives (1.0 FCE total).
- PSY 4000H\(^0\) thesis proposal and oral exam (examination in the student's area of research).
- PhD thesis.
- Students may take other courses as they wish, but it is expected that the requirements will be completed in the first two years of the PhD program. Students admitted with a master's degree from another university will normally be required to fulfill the PhD requirements; however, exemptions may be granted by the Graduate Director of the Department of Psychology.

Program Length

4 years full-time

Time Limit

6 years full-time

\(^0\) *Course that may continue over a program. The course is graded when completed.*
Appendix D: Proposed Calendar Copy

Faculty Affiliation
Arts and Science

Degree Programs
Psychology
MA
PhD

Collaborative Specializations
The following collaborative specializations are available to students in participating degree programs as listed below:

1. Addiction Studies
   o Psychology, MA, PhD
2. Aging, Palliative and Supportive Care Across the Life Course
   o Psychology, MA, PhD
3. Human Development (admissions have been suspended)
   o Psychology, PhD
4. Neuroscience
   o Psychology, MA, PhD
5. Psychology and Engineering
   o Psychology, MA, PhD
6. Sexual Diversity Studies
   o Psychology, MA, PhD
7. Women’s Health
   o Psychology, MA, PhD

Overview
Graduate training in psychology stresses training in general experimental psychology. Areas of specialization include the following:

- Behavioural Neuroscience
- Biology and behaviour
- Perception, Cognition, and Cognitive Neuroscience
- Development
- Social and Personality and abnormal psychology.

Master of Arts

Program Description
The MA program is designed to provide students with rigorous scientific training in experimental psychology. The program is one year in duration, during which time students obtain instruction in statistics and research design, and carry out a research project that culminates in a written thesis and oral examination. Students admitted to the MA program are expected to continue to the PhD program.
Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Psychology’s additional admission requirements stated below.

- Appropriate bachelor’s degree from a recognized university with a minimum A– average (or first-class standing) in the last two undergraduate years, and the equivalent of 6.0 full-course equivalents (FCEs) in psychology including statistics and some laboratory experience adequrate research performance.

- It is assumed that all students entering the MA program intend to continue in the PhD program.

Program Requirements

- Courses and individual research training leading to a thesis.

- In the MA year, students must complete 2.0 FCEs as follows:
  - PSY 1000H Directed Studies to prepare for the MA thesis research (0.5 FCE)
  - PSY 2001H Design of Experiments Statistics I, experimental design and statistics (0.5 FCE)
  - two half-course Psychology electives (1.0 FCE total).

- MA thesis.

  It is expected that following the MA year, students will proceed to the PhD program. To be eligible for admission, adequate research performance and at least an A- average are normally required.

9 Program Length

3 sessions full-time (typical registration sequence: F/W/S)

10 Time Limit

3 years full-time

Doctor of Philosophy

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Psychology’s additional admission requirements stated below.

- Appropriate University of Toronto master’s degree, or its equivalent from a recognized university, with a minimum A—average and adequate research performance.

Program Requirements

- Minimum of two years of residence beyond the master’s degree, but usually takes at least three years. Applicants with a master’s degree from another university may be required to enrol in a three-year residence program, whereby students must be on campus full-time and consequently in geographical proximity to be able to participate fully in the University activities associated with the program.
Individual programs of study are planned and include continuing research training with staff members. There is no language requirement.

Coursework: Students must complete 3.0 full-course equivalents (FCEs) as follows:

- An advanced statistics course chosen from a list provided by the department (typically PSY 2002H Design of Experiments II, usually taken in PhD 1) [0.5 FCE]
- PSY 3000H \textsuperscript{0} \textit{Outside External Research Project in Psychology}, a research project course supervised by a faculty member other than the student's PhD supervisor, completed during PhD 1 and PhD 2 [0.5 FCE]
- PSY 3001H \textit{Scientific and Professional Psychology}, taken in two modules in PhD 1 and PhD 3 [0.5 FCE] usually taken in PhD 1.
- 1.0 FCE in Psychology course electives (of this requirement, 0.5 FCE can be achieved through two 0.25 FCE Psychology module electives). Two half course Psychology electives (1.0 FCE total).
- PSY 4000H \textsuperscript{0} \textit{Doctoral Research Project}, thesis proposal and oral exam (examination in the student's area of research) [0.5 FCE].

PhD thesis.

Students may take other courses as they wish, but it is expected that the requirements will be completed in the first two years of the PhD program. Students admitted with a master's degree from another university will normally be required to fulfil the PhD requirements; however, exemptions may be granted by the Graduate Director of the Department of Psychology.

Program Length

4 years full-time

Time Limit

6 years full-time

\textsuperscript{0} \textit{Course that may continue over a program. The course is graded when completed.}

\section*{Direct-Entry PhD}

Minimum Admission Requirements

- Applicants are admitted under the General Regulations of the School of Graduate Studies. Applicants must also satisfy the Department of Psychology's additional admission requirements stated below.
• Appropriate University of Toronto bachelor's degree, or its equivalent from a recognized university, with a minimum A average and adequate research performance.

Program Requirements

• **Coursework:** Students must complete 5.0 full-course equivalents (FCEs) as follows:
  - PSY1100H *Foundational Research Project*, a research project course supervised by the student's supervisor plus two other faculty members, completed during PhD1 and PhD2 [0.5 FCE]
  - PSY 2001H *Statistics I*, an introductory statistics course [0.5 FCE]
  - An advanced statistics course chosen from a list provided by the department (typically PSY 2002H *Statistics II*, usually taken in PhD 1) [0.5 FCE]
  - PSY 3000H<sup>0</sup> *External Research Project*, a research project course supervised by a faculty member other than the student's PhD supervisor, completed during PhD 1 and PhD 2 [0.5 FCE]
  - PSY 3001H<sup>0</sup> *Professional Psychology*, taken in two modules in PhD 1 and PhD 3 [0.5 FCE]
  - 2.0 FCE in Psychology course electives (of this requirement, 0.5 FCE can be achieved through two 0.25 FCE Psychology module electives).
  - PSY 4000H<sup>0</sup> *Doctoral Research Project*, thesis proposal and oral exam (examination in the student's area of research) [0.5 FCE]
• **PhD thesis.**

Students may take other courses as they wish, but it is expected that the course requirements will be completed in the first three years of the PhD program. Students admitted with a master's degree from another university will normally be required to fulfill the PhD course requirements; however, exemptions may be granted by the Graduate Director of the Department of Psychology. Note that students with a Master's degree in Psychology or a cognate discipline will likely be admitted to the four-year PhD program, whereas students with a Master's degree in an unrelated discipline will be admitted to the Direct Entry PhD option. Such admission decisions will be made by the Graduate Director.

Program Length

5 years full-time

Time Limit

7 years full-time

<sup>0</sup> *Course that may continue over a program. The course is graded when completed.*

### Psychology: Psychology MA, PhD Courses

Not all courses are offered each year. For current offerings, consult with the graduate administrator.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 1000H</td>
<td>Directed Studies</td>
</tr>
<tr>
<td>PSY 1100H&lt;sup&gt;0&lt;/sup&gt;</td>
<td><em>Foundational Research Project</em></td>
</tr>
</tbody>
</table>

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### PSY 1200H
Selected Topics in Psychology

### PSY 1210H
Selected Topics in Psychology

### PSY 1500H
Conceptual Bases of Psychology

### PSY 2001H
Design of Experiments Statistics I

### PSY 2002H
Design of Experiments Statistics II

### PSY 3000H^0
Outside-External Research Project in Psychology

### PSY 3001H^0
Professional Psychology (Credit/No Credit)

### PSY 3100H
Psychological Science Skills

### PSY 4000H^0
Specialization Study Doctoral Research Project (Credit/No Credit)

---

**Biology and Behavioural Neuroscience Core Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 5101H</td>
<td>Mechanisms of Behaviour</td>
</tr>
<tr>
<td>PSY 5104H</td>
<td>Neuropsychology Advanced Courses</td>
</tr>
<tr>
<td>PSY 5110H</td>
<td>Advanced Topics in Behavioural Neuroscience I</td>
</tr>
<tr>
<td>PSY 5111H</td>
<td>Advanced Topics in Behavioural Neuroscience II</td>
</tr>
<tr>
<td>PSY 5112H</td>
<td>Advanced Topics in Behavioural Neuroscience III</td>
</tr>
<tr>
<td>PSY 5120H*</td>
<td>Advanced Topics in Animal Behaviour and Motivation I</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PSY 5121H</td>
<td>Advanced Topics in Animal Behaviour and Motivation II</td>
</tr>
<tr>
<td>PSY 5130H</td>
<td>Advanced Topics in Neuropsychology I</td>
</tr>
<tr>
<td>PSY 5132H</td>
<td>Advanced Topics in Neuropsychology II</td>
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**Perception/Cognition/Cognitive Neuroscience Core Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>PSY 5201H</td>
<td>Audition</td>
</tr>
<tr>
<td>PSY 5203H</td>
<td>Higher Cognition</td>
</tr>
<tr>
<td>PSY 5204H</td>
<td>Attention</td>
</tr>
<tr>
<td>PSY 5205H</td>
<td>Memory</td>
</tr>
<tr>
<td>PSY 5210H</td>
<td>Advanced Topics in Perception I</td>
</tr>
<tr>
<td>PSY 5211H</td>
<td>Advanced Topics in Perception II</td>
</tr>
<tr>
<td>PSY 5212H</td>
<td>Advanced Topics in Perception III</td>
</tr>
<tr>
<td>PSY 5220H</td>
<td>Advanced Topics in Cognition I</td>
</tr>
<tr>
<td>PSY 5221H</td>
<td>Advanced Topics in Cognition II</td>
</tr>
<tr>
<td>PSY 5222H</td>
<td>Advanced Topics in Cognition III</td>
</tr>
</tbody>
</table>

**Developmental Psychology Core Courses**

<table>
<thead>
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<th>Course Code</th>
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<tbody>
<tr>
<td>PSY 5303H</td>
<td>Cognitive Development</td>
</tr>
<tr>
<td>PSY 5304H</td>
<td>Language Development</td>
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</table>

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### Social and Personality/Abnormal Psychology Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>PSY 5401H*</td>
<td>Abnormal</td>
</tr>
<tr>
<td>PSY 5402H</td>
<td>Personality</td>
</tr>
<tr>
<td>PSY 5403H</td>
<td>Social Cognition</td>
</tr>
<tr>
<td>PSY 5410H</td>
<td>Advanced Topics in Abnormal I</td>
</tr>
<tr>
<td>PSY 5411H</td>
<td>Advanced Topics in Abnormal II</td>
</tr>
<tr>
<td>PSY 5412H*</td>
<td>Advanced Topics in Abnormal III</td>
</tr>
<tr>
<td>PSY 5420H</td>
<td>Advanced Topics in Personality I</td>
</tr>
<tr>
<td>PSY 5421H</td>
<td>Advanced Topics in Personality II</td>
</tr>
<tr>
<td>PSY 5430H</td>
<td>Advanced Topics in Social Psychology I</td>
</tr>
<tr>
<td>PSY 5431H</td>
<td>Advanced Topics in Social Psychology II</td>
</tr>
<tr>
<td>PSY 5432H</td>
<td>Advanced Topics in Social Psychology III</td>
</tr>
<tr>
<td>PSY 5433H</td>
<td>Advanced Topics in Social Psychology IV</td>
</tr>
</tbody>
</table>

*Course that may continue over a program. The course is graded when completed.*

*Extended course. For academic reasons, coursework is extended into session following academic session in which course is offered.*
Cross-Listed Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 2535H</td>
<td>Computation in Neural Networks</td>
</tr>
<tr>
<td>JLP 2450H</td>
<td>Psycholinguistics</td>
</tr>
<tr>
<td>JNS 1000Y</td>
<td>Fundamentals of Neuroscience: Systems and Behaviour</td>
</tr>
<tr>
<td>JPM 1005Y</td>
<td>Behavioural Pharmacology</td>
</tr>
<tr>
<td>JPX 1001Y</td>
<td>Parenting: Multidisciplinary Perspectives</td>
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</tbody>
</table>

*archived December 2019; flagged for deletion*
### Appendix E: Summary of New Graduate Courses and Changes to Existing Courses (Full Details)

<table>
<thead>
<tr>
<th>Type of Change</th>
<th>Course Code</th>
<th>Full Title</th>
<th>Abbreviated Title</th>
<th>FCE Weight</th>
<th>Available via SWS &amp; Evaluate Function on ROSI?</th>
<th>Course Type</th>
<th>Online Course?</th>
<th>Required of</th>
<th>Grading Scale</th>
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</thead>
<tbody>
<tr>
<td>New Courses</td>
<td>PSY 1100H</td>
<td>Foundational Research Project</td>
<td>Foundational Research Project</td>
<td>0.5 FCE</td>
<td>Yes to both</td>
<td>Continuous</td>
<td>No</td>
<td>Direct Entry students</td>
<td>Letter Grades</td>
</tr>
<tr>
<td>New Courses</td>
<td>PSY 3100H</td>
<td>Psychological Science Skills (various modules)</td>
<td>Psychological Science Skills</td>
<td>0.25 FCE (optional 0.5 FCE broken into two 0.25 FCEs)</td>
<td>Yes to both</td>
<td>Regular</td>
<td>No</td>
<td>Optional</td>
<td>Letter Grades</td>
</tr>
<tr>
<td>Course Renaming</td>
<td>PSY 2001H</td>
<td>Current: Design of Experiments I</td>
<td>Statistics I</td>
<td>0.5 FCE</td>
<td>Yes to both</td>
<td>Regular</td>
<td>No</td>
<td>Direct-Entry students*</td>
<td>Letter Grades</td>
</tr>
<tr>
<td>Course Renaming</td>
<td>PSY 2002H</td>
<td>Current: Design of Experiments II</td>
<td>Statistics II</td>
<td>0.5 FCE</td>
<td>Yes to both</td>
<td>Regular</td>
<td>No</td>
<td>All PhD students</td>
<td>Letter Grades</td>
</tr>
<tr>
<td>Course Renaming</td>
<td>PSY 3000H</td>
<td>Current: Research Project in Psychology</td>
<td>External Research Project</td>
<td>0.5 FCE</td>
<td>Yes to both</td>
<td>Continuous</td>
<td>No</td>
<td>All PhD students</td>
<td>Letter Grades</td>
</tr>
</tbody>
</table>
**Course Descriptions**

**PSY 1100H** – Students will work on their first research project in Psychology across the first two years they are in the Direct Entry PhD option. Letter grades will be used for PSY1100H. In Year 1, they will form a 3-member faculty committee and develop their proposal. Students will defend the proposed project and complete a mini orals reading list in Year 1. They will then engage in data collection over the summer and through the fall of Year 2. They will write up and defend their Foundational Research Project in Year 2. Unlike the MA thesis in the existing program, the Foundational Research Project will give students the time to develop the knowledge and skills they will need to complete a more ambitious research project that could eventually be part of their doctoral dissertation.

**PSY 3100H** - This course code will be used for 0.25 FCE modules and consist of 6-week courses that focus on psychological science skills. It will follow a ‘special topics’ model where separate meeting sections (e.g., L0101, L0201, etc) are created for each particular module and subtitles are added on ROSI. Students can take two of these 0.25 skills modules in lieu of one 0.5 FCE psychology content course (i.e., traditional seminar course). Examples of skills modules could be a 6-week module on either beginner or advanced programming in languages such as R or Python, or more specific statistical techniques such as power analysis. One of the recommendations arising from our recent UTQAP was to add skills modules so that students have a greater array of skills that they can use in their research and that will enhance their applications to both academic and non-academic jobs.
PSY 2001H - This course is designed to introduce the student to the General Linear Model and two of its most common expression: Analysis of Variance and Multiple Regression. Additionally, student we be asked to familiarize themselves with some of the current theoretical issues in realm of data analysis itself, e.g., the value of testing the null hypothesis.

PSY 2002H – This course will provide a practical introduction to a number of different advanced statistical methods used in psychological research. Specifically, the course will cover the following topics: (1) Path analysis and Mediation; (2) Mixed effects/multilevel modelling; (3) Non-gaussian models (e.g., logistic regression) and bootstrapping; (4) Bayesian Hypothesis Testing; (5) Factor analysis, including exploratory factor analysis/principal components analysis, confirmatory factor analysis, and cluster analysis; (6) Structural Equation Modelling; and, (7) Time-based analysis like time series, lagged regression, and latent growth curves. The course will place a strong emphasis on practical application, such that every class will include demonstrations, electronic copies of sample syntax in SPSS and R, and brief computer-based data analysis exercises. You will also learn to be an active consumer of quantitative psychology articles, as well as develop generalizable strategies for statistical reporting. You will only need to be familiar with one of the following statistical packages: SPSS, R, or SAS. The course will have a final project where you will be required to use one of the analyses you learn in class to analyze your own data or public data and then write methods, results, and discussion sections that describe your findings. You will also be expected to complete lab assignments that involve conducting analyses on example datasets in the statistical software package of your choice. The goal is for you to leave the class with an understanding of when and how to apply each of the statistical techniques you learn. Knowledge of these modern statistical tools will increase the flexibility of your research designs and the statistical rigour with which you analyze your data.

PSY 3000H – This is a one-term research project course spread out over the full year. The idea of this course is to give students experience doing research with a supervisor and lab other than their primary supervisor(s). The outside project supervisor must be a faculty member other than the student’s Ph.D. supervisor. The student’s primary supervisor(s) and the outside project supervisor should meet together with the student to discuss the outside project and to ensure that it fulfills both the student’s educational needs and is realistic (can be completed within the allotted time period, and that it is not so demanding that it prevents the student from conducting his or her own, primary research). A paper in the format of a manuscript, but no longer than 50 pages (including tables, references, and figures) should be submitted. Students will be graded on the basis of both the quality of the paper and their intellectual contribution to the formulation and execution of the project.
PSY 4000H – This course is intended to track the doctoral work leading up to the dissertation and is credit/no credit. In order to achieve a credit in this course, students must form a supervisory committee, present a proposal to their committee and have it approved, and defend their reading list.

PSY 3001H – This 0.5 FCE professional development course will be broken into two 0.25 FCE modules. The first 6-week module will be offered in Year 1 and will focus on early career topics, such as research ethics, open science practices, designing conference posters, applying for scholarships, and oral and written communication. The second 6-week module will be offered in Year 3 and will focus on later career topics, such as dissertations, applying for postdoctoral fellowships, and applying for academic and non-academic jobs. Professional Psychology will still be a credit/no credit course, and credit will be awarded after completion of the second module. The primary requirements are participating in class and panel discussions, with the occasional brief assignment.