

**DEPARTMENT OF PSYCHOLOGICAL AND BRAIN SCIENCES**

**DARTMOUTH COLLEGE**

**GUIDE TO THE GRADUATE PROGRAM**

(for students starting Fall 2024 or later)

Last revision: September 15, 2024

## TABLE OF CONTENTS

<b>PROGRAM OVERVIEW .....</b>	<b>3</b>
Typical Program of Study.....	3
<b>COURSEWORK, TEACHING ASSISTANTSHIPS, and RESEARCH.....</b>	<b>5</b>
Coursework.....	5
Teaching Apprenticeship Program .....	6
General Research Requirements.....	7
<b>SPECIALIST EXAM AND MASTER’S DEGREE .....</b>	<b>8</b>
Specialist Requirement.....	8
Master’s Research Presentation .....	8
<b>DISSERTATION PROCESS AND DEFENSE .....</b>	<b>11</b>
What is a dissertation? .....	11
Dissertation Process Overview.....	11
Dissertation Process - Example Timeline .....	12
Dissertation Proposal .....	12
Dissertation Format.....	13
Dissertation Defense and Submission .....	13
PhD Degree Conferral and Graduation .....	14
<b>GENERAL POLICIES.....</b>	<b>16</b>
Residence Requirement .....	16
Academic Calendar .....	16
Changing Primary Advisors.....	16
Graduate Grading System .....	16
Graduate Representative .....	16
Advisory Committees .....	17
<b>FUNDING.....</b>	<b>18</b>
Graduate Student Financial Support .....	18
Travel to Professional Meetings.....	18
<b>GRADUATE STUDENT ASSESSMENT .....</b>	<b>19</b>
<b>GRIEVANCE PROCESS FOR GRADUATE STUDENTS .....</b>	<b>20</b>
<b>APPENDICES .....</b>	<b>21</b>
Appendix A - Graduate Student Annual Report .....	21
Appendix B - PBS Specialist Committee Form .....	23
Appendix C - Request for Approval of PhD Examination Committee .....	24
Appendix D - PBS Thesis Proposal Approval Form .....	25

## PROGRAM OVERVIEW

The primary goal of the graduate program in Psychological and Brain Sciences (PBS) at Dartmouth is the training of highly-qualified students for productive careers in research and teaching. Only students who intend to pursue the Ph.D. degree full-time are accepted into the program. The program of study involves research, a set of required courses, and advanced electives. Training culminates in the production of a publishable thesis based on original research in the student's chosen field of investigation. Each student is required to work on the thesis in the laboratory of a faculty advisor. This association will determine, to a large extent, the nature of the student's individual course of study. The guidelines that follow have been adopted by the faculty to ensure that each student completing the graduate program will have acquired the necessary skills and knowledge to be effective in research and teaching in their chosen sub-discipline.

Although students are typically paired with a specific faculty advisor and lab upon their admission, students are accepted into the program and their success is important to the department as a whole. In circumstances where the student wishes to join a different lab than the one with which they are initially paired, the department will make a good faith effort to help them do so, including providing stipend funding if needed. All students are encouraged to become familiar with the research programs of all faculty in their chosen subspecialty and should feel free to discuss research-related matters with any member of the faculty.

The Graduate Program in Psychological and Brain Sciences is divided into three programmatic groups: Cognitive and Computational Neuroscience, Social and Affective Neuroscience, Systems and Behavioral Neuroscience. Although most requirements are similar for the three groups, each group can set independent requirements beyond the minimum standards set by the PBS Graduate Program. Regardless of the group in which the student completes his/her training, the student can opt to follow one of two sets of course requirements to receive his/her Ph.D. in Psychological and Brain Sciences or in Cognitive Neuroscience (see Program Requirements section).

To facilitate each student's transition from undergraduate to graduate life, the Chair of the Department and the Chair of the Graduate Committee will be available for advice about general progress and adjustment to academic life.

### **Typical Program of Study**

The following provides an overview of a typical program for a student who enters with the baccalaureate degree. Please note that the Graduate Committee, on behalf of the Department, is prepared to make changes in the program of any student when it considers the educational goals of its students to be advanced thereby. Detailed requirements for **Coursework and Teaching Assistantships, Research** and Program Milestones (**Specialist Exam and Master's degree**, and the **Dissertation Process and Defense**) can be found in the next sections of this guide.

#### **First Year**

First-year graduate students must enroll in the *Proseminar* (PSYC 100) and *Responsible and Ethical Conduct of Research* (PSYC 700). First-year students also typically enroll in at least one Core Course during their first year. First year students may opt to take the two-term sequence in statistics (PSYC 110 and 111) with the support of their advisor.

First-year students are expected to engage in the ongoing activities of a laboratory or research program. This serves to introduce the student to the research going on in his/her mentor's laboratory. Students will enroll in PSYC 188 (1 research credit), PSYC 288 (2 research credits), or PSYC 388 (3 research credits) to meet the minimum 3 credits per term to be considered "active."

During the summer of the first year, students begin to prepare for the Specialist Exam which will be completed during the second year.

## **Second Year**

Second-year graduate students must enroll in the two-term sequence in statistics (PSYC 110 and 111) if it was not taken during their first year. The instructor, in consultation with the Graduate Committee, may excuse a student with exceptional preparation from portions of this sequence. In such instances, the student is expected to enroll in another course or seminar. One or more elements of the required statistical sequence may, on occasion, be bracketed for a year for staffing or scheduling reasons. If this occurs, the student is expected to complete the sequence in the following year.

In the second year, students are expected to continue developing breadth by electing one or more courses/seminars in each term. Seminars may be relevant to a student's area of specialization, but more often they will serve to acquaint the student with areas outside his or her specialty.

In addition to seminars and research, second-year students also enroll in the Specialist Exam course (PSYC 117) while they are completing the Specialist reading and exam. Students are **STRONGLY** encouraged to complete Specialist Exam prior to the end of Winter term of 2<sup>nd</sup> year. This will allow for more time to incorporate feedback, and to plan for Master's thesis.

Following the successful completion of their Specialist Exam, students should enroll in PSYC 118 during the Spring term while they prepare for and defend their en-route master's degree. Students have the option of selecting a Spring (submission deadline of May 15) or Summer (submission deadline of August 15) master's defense. Extensions beyond August 15 of the second year will only be granted for extenuating circumstances and must be approved in advance by the primary advisor, secondary mentor, and Chair of the Graduate Committee.

## **Third Year**

As in the first and second years, each student will continue to conduct research with a member of the faculty. Students are encouraged to explore research topics that will contribute to the formulation of a dissertation proposal.

## **Fourth Year and Beyond**

Research for the dissertation usually comprises the major program of study in the fourth year, although other alternatives are possible with the approval of a student's Dissertation Committee.

## COURSEWORK, TEACHING ASSISTANTSHIPS, and RESEARCH

### Coursework

Each student must take a minimum of 8 courses during his/her time in the program. Some are required and some are electives as follows:

#### **Ph.D. in Psychological and Brain Sciences:**

- *Proseminar* (PSYC 100). REQUIRED; taken by all first-year students in the fall.
- *Responsible and Ethical Conduct of Research* (PSYC 700). REQUIRED; taken by all first-year students in the fall. (Only .33 credits and does not count towards the 8 courses.)
- *Measurement and Statistics I & II* (PSYC 110 & 111). REQUIRED; taken by first- or second-year students.
- Core Courses. REQUIRED to take at least 2 of the following:
  - Perception* (PSYC 121)
  - Affective Neuroscience* (PSYC 122)
  - Social Neuroscience* (PSYC 123)
  - Cognitive Neuroscience* (PSYC 128)
  - Cellular and Molecular Neuroscience* (IND 101)
  - Systems Neuroscience* (PSYC 126/IND 102)
- Electives. REQUIRED to take at least 3 of the following, one must be a content seminar
  - Methods Seminars (non-exhaustive list):
    - Imaging Methods* (PSYC 160)
    - Computer Programming for Brain Scientists* (PSYC 161)
    - Human Electrophysiology Lab* (PSYC 162)
    - Advanced Statistics* (PSYC 163)
    - Computational Methods* (PSYC 164)
    - Professional Development* (PSYC 167)
  - Content Seminars. REQUIRED to take at least one (non-exhaustive list):
    - Brain Evolution* (PSYC 171)
    - Computational Neuroscience* (PSYC 174)
    - Current Issues in Behavioral Neuroscience* (PSYC 175; topic varies each time this course is offered, and it can be taken more than once)
    - Learning and Memory* (PSYC 176)
    - Interacting Minds* (PSYC 177)
    - Seminar in Special Topics* (PSYC 179; topic varies each time this course is offered and it can be taken more than once)

#### **PhD in Cognitive Neuroscience:**

- *Proseminar* (PSYC 100). Taken by all first-year students in the fall.
- *Responsible and Ethical Conduct of Research* (PSYC 700). REQUIRED; taken by all first-year students in the fall. (Only .33 credits and does not count towards the 8 courses.)
- *Measurement and Statistics I & II* (PSYC 110 & 111). Taken by second year students.
- *Systems Neuroscience* (PSYC 126/IND 102)
- *Cognitive Neuroscience* (PSYC 128)
- 3 Electives from the following list (non-exhaustive):

- Programming  
*Computer Programming for Brain Scientists* (PSYC 161)  
*Machine Learning & Statistical Analysis* (COSC 174)
- Neuroimaging and Data Analysis  
*Principles of Human Brain Mapping* (PSYC 60)  
*Imaging Methods* (PSYC 160)  
*Computational Methods / Analysis of Neural Data* (PSYC 164)
- The Neural Code  
*Seminar in Special Topics* (PSYC 179) for topics relevant to cognitive neuroscience (Note: topic for PSYC 179 varies each time this course is offered, and it can be taken more than once)
  - *Virtual Reality for Psychology and Neuroscience*
  - *Computational Models of Cognition*

#### Additional Notes:

1. All students must take PSYC 700 (*Responsible and Ethical Conduct of Research*) in the fall term of their first year. PSYC 700 only carries .33 credits and does not count towards the 8 required courses.
2. Students in the Systems and Behavioral Neuroscience group must take both IND 101 and IND 102.
3. Students can take an additional Core Course as an elective for the Psychological and Brain Sciences PhD, if so desired.
4. Students may petition to receive credit for courses in other departments by requesting approval from the Graduate Committee before enrolling in the course. The student's advisor and the course instructor must also approve. In general, there is a limit of two graduate courses from outside the department that may count toward fulfilling the course requirements, unless it can be adequately demonstrated that an alternative course design would be a better program for the student.
5. In addition to courses, all graduate students must attend appropriate area research meetings and departmental colloquia.
6. Some graduate courses are offered annually each year, including the *Proseminar* course (PSYC 100), and *Measurement and Statistics I & II* (PSYC 110 & PSYC 111). Other courses are offered on a rotating basis. Students should plan their course schedule accordingly and communicate with their advisors to devise a curriculum suitable for the student's goals and experience.
7. As described below, students are also expected to be enrolled in at least one credit of Graduate Research (PSYC 188, 288, or 388) during every term.

#### **Advanced Standing**

Students who enter the program with previous graduate training at another institution may be granted credit for certain departmental requirements. The Graduate Committee, in consultation with appropriate faculty members and the Dean of Graduate Studies, will grant such credit. It is the responsibility of the student to request consideration for advanced standing by the end of the Fall term of the first year. Dartmouth stipend eligibility is reduced commensurate with advanced standing.

#### **Teaching Apprenticeship Program**

Each student will be required to serve as a teaching apprentice (TA) in four courses during his or her graduate training. Students will typically serve as a TA for one or two courses during each of the first three years, although some students, on the advice of their graduate advisor, may spread their teaching over additional years. The Chair of the Graduate Committee makes TA assignments in the spring for the following summer, fall, winter, and spring terms. Students who enter the program with advanced standing may petition the Graduate Committee for a reduction in teaching commensurate with their previous teaching experience. Note, however, that advanced standing reduces the number of terms that students are eligible for Dartmouth stipends. Students should sign up for PSYC 115 when TA-ing a course.

## **General Research Requirements**

All students must have a research advisor of record, typically chosen by students during their first term of residence (many times students will have chosen their advisor prior to their arrival at Dartmouth). All students are encouraged to become familiar with the research programs of all faculty in their chosen subspecialty and should feel free to discuss research-related matters with any member of the faculty. If a student wants to change to a new advisor, this process must be facilitated through the Graduate Committee.

Students are expected to engage in research during each term in the program and must be enrolled in Graduate Research (PSYC 188, 288, or 388) each term. Further, each year all students must submit to the Graduate Committee an updated vita and a written report detailing their research and professional activities during the previous year (see Appendix A). The deadline for this report changes each year but is typically in late April or early May.

Starting in the second year, students are required to give at least one presentation at one of the research area meetings each year. The Master's Research Presentation can fulfill this requirement for third-year students. Students in the B4 group are required to give two presentations per year starting in the first year.

Note: The difference between the three graduate research courses above reflects different amounts of course credit. PSYC 188 carries one credit, PSYC 288 carries two credits, and PSYC 388 carries three credits. Students must enroll for a minimum of three credits each term. For example, if a student is taking a seminar course (which is worth one credit), he/she would also sign up for two credits of research, PSYC 288.

## SPECIALIST EXAM AND MASTER'S DEGREE

### **Specialist Requirement/Exam**

The Specialist Requirement is designed to ensure that students have basic knowledge in their chosen sub-discipline that prepares them for their pre-dissertation and dissertation research. It consists of a reading list tailored to the student's sub-discipline and a take-home exam based on the readings. This take-home exam must be turned in by the first day of the spring term of their second year.

As soon as a graduate student begins his or her specialization (typically during the spring or early summer of the first year and no later than the start of the fall term of their second year), the student should request, *in writing*, approval for their Specialist Committee (see Appendix C: PBS Specialist Committee Form). The Specialist Committee is comprised of three faculty members from the Program, typically from within the student's section of the program who will prepare, administer, and grade the Specialist Exam. Two committee members must hold regular (tenure/tenure track) appointments in the Psychological and Brain Sciences Department or be a member of the PBS graduate faculty; the third member may hold a non-regular (e.g., visiting, adjunct, teaching, or research) appointment. A fourth member, from outside the Program, may be added if the student's area involves cross-disciplinary work. As far as is possible, the student's request for committee membership will be honored.

Note that the three research areas may have their own specific specialist requirements in addition to the standard exam, described below.

Each member of the specialist committee will provide the student with a reading list that covers the classical literature in their field (i.e., Behavioral, Cognitive, Social). The student completes these readings during the summer, fall, and winter of the second year. Once the readings are completed, the Specialist Committee will submit their take-home exam questions to the Chair of the Graduate Committee. The Chair will then send the questions to the student; the student should send his or her answers back to the Chair of the Graduate Committee. Each question will be graded on a scale from 0.0 to 3.0 by ½ point increments. A grade of 2.0 is considered passing. The student must achieve an average grade of 2.0 or higher for the questions submitted by each faculty member. Graders have the right to request a rewrite of any question regardless of the score. If the student does not achieve a passing grade upon rewriting the required questions, he/she may be dismissed from the program.

The Specialist Committee will notify the Chair of the Graduate Committee of the successful completion of the Exam.

While working on the Specialist Requirement students should enroll in PSYC 117. Typically, all second-year students are enrolled in PSYC 117 during the winter term.

Failure to complete the Specialist Exam by the first day of the spring term of the student's second year will result in the student receiving a grade of NC for the winter term of PSYC 117 and being placed on academic probation. Failure to complete the requirement before the standing meeting in the student's second year will result in a second grade of NC which results in dismissal from the program.

### **Master's Research Presentation**

The ability to conduct research and give presentations on your research is central to success in science. During the fall term of their third year, graduate students are required to give a presentation discussing research they have conducted since arriving in PBS. These presentations will be given to the entire department on a day(s) determined by the Graduate Committee. Presentations must describe research project(s) led by the student. Each presentation should last about ten minutes and the student will then answer questions from the audience. Although mandatory, Master's Research Presentation is not graded and serves as a celebratory event for students to share their work with the entire department.



## Procedure for en route master's degree

All students will be recommended for the non-terminal degree of **Master of Science** upon completion of the relevant program course requirements and specialist exams.

Course requirements (minimum 9 courses; Dartmouth requires a minimum of 8 courses for a master's degree):

1. Proseminar (100): 1 course
2. Measurement and Statistics (110, 111) or other approved methods course(s) if they obtained an exemption from PSYC 110 and/or 111: 2 courses
3. Two core courses relevant to the field of study: 2 courses
4. Six credits of Graduate Research. PSYC 388 counts as 3 credits, PSYC 288 as two credits, and PSYC 188 counts as one. Note that this means that a minimum of two Graduate Research *courses* will be required to obtain six Graduate Research course *credits* (2 x PSYC 388) but any other combination is acceptable, as long as the total Graduate Research credits is 6.

Specialist exams:

5. Passed Specialist Exam (PSYC 117): 1 course
6. Completed Master's thesis (writing and defending a written thesis on a research project)\* (PSYC 118): 1 course

### \*Research thesis requirement

Students should write and defend a written thesis on a research project that was conducted at Dartmouth during their time in the graduate program. This report should follow the format of a scientific research paper (Introduction, Methods, Results, Discussion). Students may submit a submitted or published manuscript, based on their work at Dartmouth, in lieu of a research report. To defend their thesis, students should form a Master's thesis committee. The Master's thesis committee should be comprised of the student's primary PI and one additional PBS faculty member, assigned by the graduate committee in consultation with the student's PI. To begin the Master's thesis process, students should send a brief, 2-page prospectus of the project they are planning to write their thesis on to their committee for approval (by email). The goal of this approval step is for the committee to establish that the research project: 1) is substantial, 2) was led and completed by the student, and 3) was performed at Dartmouth. Note that the research project described in the Master's thesis need not yet be complete, published, or even publishable (i.e. it may describe a null result or research in progress). Next, students should schedule a 1-hour thesis defense with their committee. Completed research theses should be submitted to their committee by email ~2 weeks prior to the scheduled defense. During the defense, the committee should provide feedback on the student's work and suggest any necessary revisions.

**Timeline:** Students are encouraged to start Master's thesis process as early as they are ready (likely at the beginning of Y2). It is recommended that the MS thesis defense be scheduled in the Spring term of Y2. At latest, the thesis must be successfully completed (i.e., defended, revised if necessary, and passed) by August 15 of Y2. Please note that to obtain a master's degree in June, you need to complete all your requirements by May 15. Students will not be able to progress to Y3 of the PhD program if they have not passed their Specialists by this time. In the case of extenuating circumstances, exceptions to this policy may be granted by the Graduate Committee on a case-by-case basis by written petition.

**Evaluation:** The Master's thesis will be evaluated based on the following grading system. HP: Excellent; P: Acceptable to move on to the PhD without revision; LP: Possibility of revision to P or HP, but must be accomplished by August 15 deadline; NC: No possibility of revision. Unless an extension is granted as described above, an incomplete thesis or grade of LP or NC on Dec 1 of Y3 will result in no master's degree and termination from the program.

The same requirements apply to students who aim to get a terminal master's degree. However, note that no student will be admitted to the PBS Graduate Program with the expectation that only the master's degree would be completed.

Current students who entered our program prior to Fall 2022 and have already passed Specialist exams (previously called Specialist Part 1 and Part 2), can obtain a master's degree by defending a written thesis on a research project, as described above.

## DISSERTATION PROCESS AND DEFENSE

### What is a dissertation?

A doctoral dissertation is the written culmination of your scholarly work in graduate school. It should describe an original study or series of studies that represent(s) a substantial contribution to knowledge in Psychological and Brain Sciences. In its final form, a dissertation generally includes an extensive literature review relevant to the conducted studies, a description of methods and results, and a thorough discussion of the findings in the theoretical context of the literature. All dissertations at Dartmouth are bound and stored at the library. Recent theses are available online via the Dartmouth Library at: <https://researchguides.dartmouth.edu/dissertations>.

### Dissertation Process Overview

1. **Decide on dissertation content (~2.5 years before dissertation defense):** The dissertation process begins after Specialist Exams are complete, usually during the summer between the second and third year. Students should be thinking about possible dissertation content and formats during this time.
2. **Form a dissertation committee (~2.5 years before dissertation defense):** Once you have your dissertation format/content in mind, you should form a dissertation committee. You are strongly encouraged to form your committee on the earlier side of Y3. At latest, you should have identified the third internal member of your committee by the end of Y3 and the external member by the end of Y4. After discussing possible committee members with your advisor, you should approach those faculty members yourself to request their participation. Many faculty members will want you to give them at least a general idea of topics you are considering for your thesis as well as a tentative timeline for when you plan to defend. Once faculty members have agreed to serve on the committee, you should forward a list of the names to the Graduate Committee, and complete the formal Request for Approval of the Ph.D. Committee (Appendix D).
3. **Dissertation direction meeting (~2.25 years before dissertation defense):** Before the end of Y3, you should schedule a meeting with the internal members of your committee to talk about your plans and timeline for your dissertation.
4. **Propose your dissertation (~1-2 years before dissertation defense):** You should propose your dissertation to your committee at least 9 months prior to the planned date of your dissertation defense. Exceptions to this timeframe must be submitted in writing and approved by the Graduate Committee. The dissertation proposal consists of two parts: 1) a written proposal, and 2) an oral proposal defense (see below). To get started, schedule a proposal defense date with your committee. Then, you should make sure to submit the written dissertation proposal (see format below) to your Committee by email at least 2 weeks before the scheduled proposal defense (leaving the committee enough time to read the proposal). The proposal defense typically takes place in the spring term before the academic year in which you plan to graduate, but you can choose any quarter. Upon successful defense of the dissertation proposal, you should complete the PBS Thesis Proposal Approval Form (Appendix E), obtain the signature of your Dissertation Committee chair, and submit this form to the PBS Department Administrator.
5. **Write your dissertation (~1 year before dissertation defense):** After completing the proposed dissertation research, it is time to write the dissertation. Information on the dissertation format can be found below. The dissertation should be submitted to the dissertation committee at least 2 weeks prior to the private oral defense.
6. **Hold your private dissertation defense (~>4 weeks before Guarini deadline):** The dissertation defense process consists of two parts: 1) a private defense, and 2) a public defense (see below). Any revisions to your dissertation required by your committee must be completed before the public defense. Once your dissertation is finalized (see formatting below), be sure to get your title page signed by your dissertation committee.
7. **Submit dissertation to Guarini for approval (quarterly deadline):** Congratulations! The department has approved your dissertation. Now it's time to submit your dissertation to Guarini for approval, so that you can earn your PhD and graduate. Importantly, the Guarini dissertation submission deadlines occur quarterly on specific dates (August 15; October 1; February 1; May 15). Please check the Guarini website for current submission deadlines and related submission forms: [Guarini Information for Submission of Dissertations](#). The

Department also requests that students provide one bound hard copy of their dissertation for the Department's library. Your degree will be conferred at the next (quarterly) Board of Trustees meeting after your submission deadline.

8. **Hold your public dissertation defense:** The public dissertation defense will be held in the department, and is an opportunity to share your work with your colleagues, friends, and family, and to celebrate your achievement.
9. **Congratulations on your PhD!** It is time to celebrate! You may also register to attend the next commencement ceremony in June to celebrate this achievement.

## Dissertation Process - Example Timeline

### An example timeline



### Dissertation Committee

The primary purpose of the Dissertation Committee is to advise the student during the dissertation process and to certify to the Department that the student has written and defended an acceptable dissertation. The dissertation committee consists of four regular, full-time faculty members: a student's primary advisor (the chairperson), two other "internal members" (Dartmouth faculty members, one of whom must be from PBS), and an "external member" (who must have a faculty-equivalent research appointment at a university outside of Dartmouth). By default, one internal member of the student's committee will be assigned by the Department and will have served on the student's Master's thesis committee. A student can petition the Graduate School to allow one internal member of the committee to have an adjunct, visiting, or research appointment at Dartmouth; this person would not qualify as an outside member and could not serve as chairperson. The Dean of the Graduate School approves the Dissertation Committee upon recommendation of the Department, and as far as it is possible, the student's preferences are honored.

### Dissertation Proposal

After forming a Dissertation Committee, students must propose their dissertation to their Committee. The dissertation proposal process consists of two parts: 1) a written proposal, and 2) an oral proposal defense.

The Dissertation Proposal is an opportunity to receive feedback and guidance from the Dissertation Committee on the ongoing research included in the dissertation. The final dissertation may include research that has already been completed by this point in the PhD, was potentially included in your Master's thesis, and might even be published. However, you must propose new and/or ongoing work in your Dissertation Proposal (i.e., conducting a final study remaining in the PhD, completing a remaining set of analyses, or developing a theoretical framework that binds multiple studies together).

The format of the written dissertation proposal is flexible, and should be decided through conversation with the primary research advisor. Most often, the dissertation proposal will take the following form:

- An NRSA (F31) proposal. This proposal should follow the format of an NIH F31 “research strategy” (~6 pages, excluding references). This proposal will emphasize your planned, unfinished work, but may feature the work you have completed thus far in the PhD as relevant background. Students are also strongly encouraged to submit the proposal to funding agencies that provide support for graduate students.

After submitting the dissertation proposal to their committee (by email ~2 weeks before the defense), the student will make a presentation to the Dissertation Committee (a proposal defense). The proposal defense should be scheduled for ~1.5 hours, with an oral presentation by the student (~20 minutes) as well as time for questions (~40 minutes). In the oral presentation, the student will outline their proposed work, and might include an overview of their completed PhD work in the motivation/introduction, as well as a proposed timeline for their dissertation work. During the Q&A period, the student should expect to receive both broad questions about their field of inquiry as well as specific questions about the details of his or her proposed studies. Immediately after the Q&A period, the Committee should briefly confer in private to discuss the proposed work (~15 mins), before calling the student back into the room and providing feedback (~15 mins).

### **Dissertation Format**

The form of the dissertation is flexible and should be decided through conversation with the primary research advisor. Most often, the dissertation will take one of two forms:

1. The “paper sandwich” form. In this form, the dissertation consists of at least five chapters:
  - A broad introductory chapter that describes the overall question and background literature relevant to the three papers.
  - Approximately three publication-quality scientific articles describing original empirical research (one paper / chapter). Because papers vary greatly in complexity, the exact number of papers included will be determined in consultation with the student’s PI and committee. Each paper should include an introduction, methods, results, and discussion. The student must be the first author on each paper, or receive permission from their committee to include papers on which they are co-authors. In some cases, a paper may already be published or in-press.
  - A discussion chapter that synthesizes the results of these papers, discusses their theoretical significance, and raises next steps.
2. A single report form. In this form, the dissertation will again consist of approximately four chapters:
  - A broad introductory chapter that describes the overall question and background literature relevant to the student’s project(s).
  - A methods chapter, covering the methods of the student’s project(s).
  - A results chapter, covering the results of the student’s project(s).
  - A discussion chapter that synthesizes the results of the student’s project(s), discusses their theoretical significance, and raises next steps.

Regardless of which dissertation form you choose, the dissertation formatting should conform to the guidelines provided by the most up-to-date Guarini School of Graduate and Advanced Studies, [found here](#).

### **Dissertation Defense and Submission**

The dissertation defense process consists of two parts: 1) a private defense, and 2) a public defense (see Dissertation Process Overview). The student is responsible for scheduling these defenses with their committee members, after discussing the timeline with their primary advisor. The student should submit the written dissertation to their committee by email at least two weeks before the first defense (the private defense).

**Private dissertation defense.** The Dissertation Committee conducts a private oral examination of the candidate, in which the candidate must present and defend the dissertation and demonstrate in the widest sense that they are prepared for a scholarly career in the field. The student must make the final draft of the dissertation available to the Committee two weeks prior to the private oral defense. The private defense must be scheduled prior to the public dissertation defense and allow enough time between the two defenses to complete all requested revisions. The

defense should be scheduled for ~2.5 hours. During the defense, the student will make an oral presentation relating to the dissertation studies (~45 minutes), which will be followed by a Q&A period (~60-75 minutes). The student should expect to receive both broad and detailed questions about their presented work. Immediately after the Q&A period, the Committee should privately discuss the proposed work and determine how the student should proceed and what revisions may be required (~15 mins). Then, they should call the student back into the room and provide feedback to the student (~15 mins). If any member of the Dissertation Committee finds that the submitted thesis is inadequate before the defense, that member must communicate his/her concerns to the thesis advisor and the other members of the committee. This may result in the cancellation of the private thesis defense, up to 48 hours before the scheduled meeting. In accordance with College policy, it is the responsibility of the Chair of the Dissertation Committee to ensure that all Dartmouth members of the Dissertation Committee are present in the room at the dissertation defense. The Department does not provide travel or housing funds for the external member. As per College policy, the external member may attend the defense in person or via video conference.

**Department approval.** After all of the Committee members have approved of the private oral defense and written thesis (pending minor revisions), the student should have each Committee member sign the cover sheet of their dissertation. A copy of the signed cover sheet must be provided to the PBS Department Administrator following the conclusion of the public defense. The Department will then generate a Certification letter to be signed by the Department Chair and presented by the student along with the final printed dissertation to the Guarini Graduate School Registrar.

**Dissertation submission to Guarini.** After the department has approved your dissertation, you must submit your dissertation to Guarini for approval. Importantly, the Guarini dissertation submission deadlines occur quarterly on specific dates (August 15; October 1; February 1; May 15). Please check the Guarini website for current submission deadlines and related submission forms: [Guarini Information for Submission of Dissertations](#). The dissertation must also be approved by the Dean of Graduate Studies in consultation with the Department. Your degree will be conferred at the next (quarterly) Board of Trustees meeting after your submission deadline.

**Public dissertation defense.** The student must also present and defend the dissertation in a public colloquium attended by committee members and open to the public. The final dissertation must be submitted to the Graduate School Office no later than the date of the public dissertation defense (i.e., it must be submitted to the Graduate School either before or on the same day as the public defense). A close-to-final draft (pending only minor revisions) must also be available to other faculty members in the department upon request, two weeks prior to the public oral defense. The public dissertation defense should be scheduled at or before 3:30pm on a weekday. Because the public defense occurs *after* the final, signed version of the dissertation is submitted to the Graduate Office, it does not serve the same purpose as the private defense. The purpose of the public defense is not to evaluate the merit of the work, but to share it with the larger community and celebrate the student's accomplishment.

**Dissertation archiving.** The Department requests that students provide one bound hard copy of their dissertation for the Department's library collection.

## **PhD Degree Conferral and Graduation**

**PhD degree conferral.** As mentioned above, the official date of degree conferral is dependent upon the timing of the next Board of Trustees meeting following your dissertation submission. This is different from your graduation date, which depends upon the academic year in which you complete your degree requirements. Examples: 1. Submit between Feb 2 and May 15 - degree conferral AND graduation date is ~June 10th. 2. Submit between May 16 and August 15 - degree conferral is ~August 31 but graduation date is ~June 10th the following year.

**Investiture and Commencement.** The Guarini School of Graduate and Advanced Studies at Dartmouth will host an Investiture Ceremony for graduating doctoral students on the Saturday prior to Sunday's Commencement. Invitations will be sent out in late March to the students who've graduated/indicated plans to graduate during that academic year on Banner. If you do not receive an invitation, be sure to reach out to the Guarini Registrar.

Doctoral students are also invited to march in Sunday's Commencement ceremonies on the Dartmouth Green. Graduate and professional students will be emailed assembly instructions (separate from undergraduate students and faculty) in the weeks prior to the ceremony.

## GENERAL POLICIES

### **Residence Requirement**

To earn the doctorate at Dartmouth, a student must study full-time in residence at Dartmouth for at least six terms (two academic years).

### **Academic Calendar**

The graduate program is active for all four quarters of the academic year, and graduate students are expected to maintain active research programs and course loads during each term, including summer, and may be called upon to serve as a TA during the summer as well.

### **Changing Primary Advisors**

If a student wants to change to a new advisor, this process must be facilitated through the Graduate Committee.

### **Graduate Grading System**

Four grades are used to evaluate the academic work of graduate students: HP (high pass), P (pass), LP (low pass), and NC (no credit). HP will signify work of distinctly superior quality; P will signify work of good quality; and LP will signify work acceptable for graduate credit but in which one or more serious deficiencies were exhibited. NC is to be used when a student's work is so unsatisfactory or incomplete as to receive no credit. ON (ongoing) is used when work for a course is continued from one term to the next and is frequently used for the Specialist course (PSYC 117). ON grades are temporary and are replaced by final grades (HP, P, LP, or NC) once the relevant work is completed.

By current practice of the faculty, P is the modal grade. Students are free to seek oral or written evaluations of course and research work from their instructors to supplement the letter grades received, and members of the faculty are strongly encouraged to provide written evaluations directly to students with copies sent to the Graduate Committee.

Any graduate student who has received more than one LP grade or has received one NC grade will be placed on probation for at least one term.

The PBS Graduate Committee will review the student's progress during the probationary period. At the end of the probationary period, the Committee will inform the Dean of the School of Graduate and Advanced Studies, in writing, as to whether the student has produced coursework and/or research at a satisfactory level. If such is the case the student will be removed from probationary status. If, however, the student has not met the departmental standards for satisfactory progress, the student will be placed in 'unsatisfactory standing' until satisfactory progress is achieved according to the written requirements of the Graduate Committee. A student in 'unsatisfactory standing' is not eligible for federal loans or Dartmouth awards.

A graduate student who receives more than two LP grades or more than one NC grade may be removed from the program. This means that, for example, a total of three LP grades, two LP and one NC, or two NCs can result in removal.

The primary advisor can petition the PBS Graduate Committee to ask that a student be terminated from the program or moved to the Master's track if an 'unsatisfactory academic standing' has gone unresolved after the probationary measures. In addition, faculty can vote to terminate a student from the program, independent of the student's academic standing, if the faculty believes that the student is failing to make satisfactory progress in research or violates accepted ethical standards of scholarship.

### **Graduate Representative**

Each year all current graduate students will nominate individuals to serve as Graduate Representatives. The nominations will be considered by the Graduate Committee in selecting student representatives (one representative from each research area). The Graduate Representatives will serve as the primary liaisons between the graduate student body and the Graduate Committee regarding graduate program business, policy, and recruiting.



### **Advisory Committees**

Advisory Committees will be assigned to all first- and second-year students. The goal of the Committee is to provide professional guidance, mentoring, and personal support for students early in their careers. The Committee will consist of 1-2 faculty in addition to the primary mentor, and will also include a senior graduate student peer. The committee will be required to meet with the student as a full group at the outset of the fall term of the student's first year. In addition, the student will meet annually with each member of his/her mentoring team (one on one) in each of those years. The meetings will be documented as having occurred using forms that will be turned into the department administrator. In addition, materials will be provided by the Graduate Committee to help guide the content of the meetings.

## FUNDING

### **Graduate Student Financial Support**

First-year student stipends normally begin September 1 of each calendar year with the result that the first check is available October 1. When possible, contracts for continuing students are written for twelve months. Students on partial stipends will receive the same monthly stipend, but for fewer months. In the case of students who are in the last year, support normally will be ended June 15<sup>th</sup> unless visa restrictions require an earlier program end date.

There is no guarantee that stipend support will be provided to any student beyond the 5<sup>th</sup> year in the graduate program. Stipend support after the fifth year can be eliminated independent of the source of the stipend (e.g., Dartmouth DF, NRSA, or funds from faculty grant).

Following the public defense of the doctoral thesis, a student's stipend will end no later than the following dates. If a student defends during the Spring term, the stipend will end no later than June 15<sup>th</sup>. If a student defends during the summer term, the stipend will end no later than September 15<sup>th</sup>. If a student defends during the Fall term, the stipend will end no later than December 15<sup>th</sup>. If a student defends during the Winter term, the stipend will end no later than March 15<sup>th</sup>. International students are advised to reach out to their OVIS advisor well in advance to ensure that their Program End Date aligns with their defense timeline.

For students defending during the Spring and Summer terms, health insurance benefits will continue through August 31.

It is the policy of the Dartmouth School of Graduate and Advanced Studies that graduate students who are fully supported (a full tuition scholarship and a full stipend) cannot receive additional payment from Dartmouth College for services rendered. Further, fully supported students cannot not accept employment outside Dartmouth without the explicit approval of the PBS Graduate Committee and the Dean of the School of Graduate and Advanced Studies.

Students must carry three credits at all times to be considered active in the program and eligible for their stipend.

### **Travel to Professional Meetings**

The Graduate School has limited funds available to cover part of the transportation expenses of graduate students who present papers at professional meetings. Application must be made in writing to the Graduate School Office describing the meeting to be attended, the title of the paper to be presented, and the source of any other travel funds available to the student. This request should be endorsed by the student's advisor or the Chair of the Department.

An annual travel stipend of \$350 is also available through the Department and application for this fund must be made in writing to the Chair of the Graduate Committee. Like Graduate School funds, Department funds are available to pay for travel and conference registration fees for students presenting papers at professional meetings. Students traveling on either Department or Graduate School funds must apply for these funds in advance of their trip and prepare College business expense reimbursement forms, with original receipts, upon the completion of their trip.

## **GRADUATE STUDENT ASSESSMENT**

At the close of each term, the progress of graduate students will be reviewed by the Graduate Committee. At the end of the spring term each year, each graduate student will prepare a progress report (see Appendix A) and submit this report, along with an updated CV, to the Chair of the Graduate Committee and the Department Administrator. Each student's advisor will also prepare a report on the student's progress across the year. Additional evaluation will also come from faculty for which the student has TA'ed. Both of these reports are reviewed by the Graduate Committee and the general faculty. Information from a student's Specialist, Master's and Dissertation committees will also be considered in these annual reviews. The faculty will determine whether the student is progressing satisfactorily and will be allowed to continue in the program. Following this evaluation, each student will receive a letter stating his or her standing in the program, as determined by the annual review. In addition, each student will receive from his or her advisor a copy of the advisor's evaluation. It is expected that each advisor will hold a meeting with each student to discuss the past year's progress and goals for the upcoming year.

The faculty has the right to suspend or terminate graduate students who are not making satisfactory progress in courses or in research, or who violate accepted ethical standards of scholarship. Even if grades allow for a student to continue in the program a student may still be terminated based on agreement between the Graduate Committee, Graduate School, and faculty advisor or by a vote of the faculty, taking into account the best interests of the student and the program. The faculty may exercise its right to terminate students who are not on probation or unsatisfactory standing if the faculty believes that a student is unlikely to make satisfactory progress in research or coursework or if the student's behavior indicates to the faculty that the person is unsuitable for an academic career. Decisions to terminate students can be made at any point during the year.

## **GRIEVANCE PROCESS FOR GRADUATE STUDENTS**

Students have the right to appeal all decisions made by the faculty. An overview of the grievance process is given below.

### **A. Informal Resolution Within Graduate Program/PBS**

Whenever possible, students should speak directly to the person who bears responsibility for the complaint or who is the alleged cause of the complaint. If this is not possible or proves unsatisfactory, students should discuss the matter with their primary advisor (or members of their Dissertation Committee). If the matter is not resolved at this stage, students should speak to the Chair of the Graduate Committee and/or the Chair of the Department. Failure to resolve the problem at this level necessitates that the student contact the Assistant Dean of the School of Graduate and Advanced Studies to arrange mediation.

### **B. Mediation by the Graduate Office**

If a satisfactory resolution cannot be reached within PBS, the student may request a meeting with the Dean of the School of Graduate and Advanced Studies to discuss the issue. If the Dean working together with the student and appropriate faculty member(s), or representatives of the department(s) or other programmatic unit(s) is unable to reach a satisfactory resolution, the student can request a formal hearing and ruling by the Dean of the School of Graduate and Advanced Studies and the Committee on Student Grievances.

### **C. Formal Grievance Hearing**

Formal hearings are conducted as described in the Graduate Handbook (see sections titled "Committee on Student Grievances" and "Formal Hearing" under Academic and Conduct Regulations).

## APPENDICES

### Appendix A - Graduate Student Annual Report

#### **Department of Psychological and Brain Sciences Graduate Student Annual Report**

*An editable version of this form will be provided to students each spring. The deadline varies slightly each year, but usually it must be completed and returned to the Chair of the Graduate Committee and Department Administrator along with a copy of your most recent C.V. by early May.*

#### **STUDENT INFORMATION**

Student:

Advisor:

Year in Program:

#### **PROGRAM MILESTONES**

**Second year or beyond**, indicate your progress on the following requirements:

<b>Milestone</b>	<b>Deadline</b>	<b>Yes</b>	<b>No</b>
I presented at a research area meeting (CBB, SBS, B4, or the 2nd Year/Master's Research Presentation Day) this year	(Annual requirement, second year or beyond)		
I have assembled my Specialist Committee (list names below)	First day of the fall term of your second year		
I entered the program after Fall, 2015 and have completed the essay exam for the Specialist Requirement.	First day of the spring term of your second year.		
I entered the program after Fall, 2015 and presented my research during the 2 <sup>nd</sup> Year/Master's Research Presentation Day.	On specified date during the spring term of your second year.		
I entered the program before Fall, 2015 and have completed Part I of the Specialist Requirement.	Last day of the spring term of your second year.		
I entered the program before Fall, 2015 and have completed Part II of the Specialist Requirement/defended Master's Thesis.	First day of the fall term of your third year.		
I have assembled and received approval for my Dissertation Committee (list names below)	Last day of the spring term before your final year in the program.		
I have submitted my dissertation proposal to my Dissertation Committee and received their approval.	Last day of the spring term before your final year in the program.		

## **UPDATE ON ACTIVITIES**

### **Professional Activities:**

Include in this section dates and locations, where appropriate. Common categories include: honors/prizes received, memberships in professional organizations, professional consulting (nature of consulting and time commitment), professional meetings attended, refereeing of journals or reviewer of grants/manuscripts/etc., workshops attended, and other professional activities.

### **Committee/Administrative Service:**

Provide dates and nature of participation, e.g. colloquium committee, computer committee, etc.

### **Teaching and Research Presentations:**

Courses taught/guest lectures and TA duties. Indicate any research talks you gave during the year (e.g. colloquia, brown bags, informal talks, etc.). For conference papers and posters provide name of organization, location, dates, and title. With an asterisk, denote the research presentation in the past academic year that fulfilled your annual requirement to present at a research area meeting (B4, CBB, SBS or Master's Research Presentation).

### **Activities related to supervising or assisting undergraduate and graduate thesis and other independent projects:**

Provide names of students, dates, and nature of your participation. Include other mentoring duties, such as tutoring and career advising.

### **Grants/Fellowships for research applied for or received during present academic year:**

Include information on organization, title of program, title of project, and status of application (e.g., awarded, denied, approved w/o funding, pending). Indicate your role in the project, e.g., principal investigator, co-principal investigator, recipient, etc. List all current grant support (do not include your advisor's grants if you were not involved in the application process).

### **Publications and/or other professional works:**

Indicate whether the publications were reviewed, invited, etc. Follow APA format for references. Indicate whether papers have been accepted, accepted with revisions, or rejected with invitation to resubmit.

### **Describe current scholarly work in progress (i.e., manuscripts you are working on):**

Include your major research activities (i.e., studies conducted, IRB protocols submitted during the last year).

### **Describe your major research plans for the next academic year:**

Also include any plans for writing or submitting manuscripts or grant applications.

**Appendix B - PBS Specialist Committee Form**

**Graduate Student Name:** \_\_\_\_\_

**Specialist Committee Members:**

**Chair**

**1.** \_\_\_\_\_

**Title (Asst. Prof, Assoc. Prof, or Prof.):** \_\_\_\_\_

**2.** \_\_\_\_\_

**Title:** \_\_\_\_\_

**3.** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Approved by:**

**Chair of Graduate Committee:**

\_\_\_\_\_ **Date:** \_\_\_\_\_

**Received by Department Administrator:**

---

*Note: After filling out this form, obtain the signature of the Chair of the Graduate Committee and turn it in to the PBS Department Administrator.*



**Request For Approval of PhD Examination Committee**

Student Name:	
Program:	

Examination committee must include 3 full-time Dartmouth faculty members of which a minimum of two must be from the student's graduate program (including the Dissertation advisor) as well as an external member with a faculty-equivalent research appointment outside of Dartmouth College. The external member may participate in meetings in person or via video conference.

Committee Member #1: Full-time Dartmouth faculty member with faculty appointment in your program

Dissertation Advisor:	
Department:	
Advisor Title:	

*(Professor, Associate, Assistant, Adjunct, Teaching, etc.)*

Committee Member #2: Full-time Dartmouth faculty member with faculty appointment in your program

Faculty Name:	
Department	
Faculty Title	

*(Professor, Associate, Assistant, Adjunct, Teaching, etc.)*

Committee Member #3: Full-time Dartmouth faculty member (inside or outside your program)

Faculty Name:	
Department	
Faculty Title	

*(Professor, Associate, Assistant, Adjunct, Teaching, etc.)*

Committee Member #4: Full-time Faculty member with appointment outside Dartmouth College

Faculty Name:	
Department	
Academic Institution:	
Faculty Title	

*(Professor, Associate, Assistant, Adjunct, Teaching, etc.)*

**Approval Signatures:**

\_\_\_\_\_ Advisor Date \_\_\_\_\_

\_\_\_\_\_ Graduate Chair Date: \_\_\_\_\_

\_\_\_\_\_ Graduate Office Date: \_\_\_\_\_

*This form is required by the Office of Graduate Studies. After completing and securing advisor and Graduate Chair signatures, please return to the PBS Department Administrator for transmittal to the Graduate Office.*



**Appendix D - PBS Thesis Proposal Approval Form**

Date: \_\_\_\_\_

Student: \_\_\_\_\_

The student named above has submitted and presented a dissertation proposal to their Ph.D. Dissertation Committee and the Committee has reviewed and approved of their proposal.

Our approval of the proposal indicates that we consider it to be a reasonable plan for dissertation research. However, it is also our understanding that the exploratory nature of original research may require revisions to this plan before an acceptable dissertation is completed. For that reason, we expect the candidate to keep the committee informed of experimental results as the program of research progresses.

\_\_\_\_\_  
Print name of Dissertation Committee Chair

\_\_\_\_\_  
Signature of Dissertation Committee Chair  
Signed on behalf of the Committee

\_\_\_\_\_  
*Note: This form is to be filled out when the dissertation proposal is presented to the dissertation committee. When the proposal is approved by the committee, obtain the signature of the Committee Chair and submit the form to the PBS Department Administrator.*