PhD Student Guide

Doctoral Program in: Cognition and Neuroscience

School of Behavioral and Brain Sciences The University of Texas at Dallas

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SECTION 1 - INTRODUCTION AND OVERVIEW

The BBS Cognition and Neuroscience PhD Student Guide is a working document that provides information on policies and procedures on the Cognition and Neuroscience PhD Program in the School of Behavioral and Brain Sciences (BBS). It does not replace, but rather supplements, information you can find from official University sources, including the <u>Office of Graduate Education</u> and the <u>Graduate Catalog</u>.

The BBS faculty and its representatives on the Graduate Studies Committee may make changes which could affect students during their time at UTD. Likewise, legislative actions, financial realities, or changes in University policy may affect academic requirements. Our curricula and requirements are under continuing faculty review. When changes occur, we will do our best to notify you in a timely manner, so be sure to check your UTD e-mail regularly. If you have questions not answered in this Guide or you are unsure about policies and procedures, please contact Dr. Robert Stillman, Associate Dean for Graduate Studies, or your Department Head (Dr. Dussor for Neuroscience or Dr. Holub for Psychology.)

Like all universities here and abroad, financial pressures resulting from declining government support will impact faculty and students alike. Fortunately, UT Dallas is a healthy and growing institution and has not experienced the severe cutbacks other universities have faced. Nonetheless, we will be expected to make our programs more efficient and effective. Time to degree is an important measure of program efficiency and there will be pressure on students and their mentors to decrease the time between program milestones. There will also be regular and rigorous evaluation of student performance. We must be certain that the students in whom we invest our time and financial resources are the ones having the greatest likelihood of success in the program and their careers.

Section 1.A Cognition and Neuroscience PhD Program Track Overview

The Cognition and Neuroscience PhD program includes two distinct tracks for completing the PhD. These tracks are the Cognitive Neuroscience (CN) and the Systems and Cellular Neuroscience (SCN) tracks. Students typically interview separately for admission into a single track and most faculty are associated with only one of the two tracks. Officially, students (after Spring 2022) will have listed both the full degree (Cognition and Neuroscience PhD) and the specific track on their transcript. In Section 1 of this guide, we describe the common elements of the two tracks. In section 2 below you can find specific information for the CN track and in section 3 you can find specific information for the SCN track.

Section 1.B PhD Program Administration

- 1. **Program Directors:** Dr. Kristen Kennedy for the Cognitive Neuroscience (CN) track and Dr. Benedict Kolber for the Systems and Cellular Neuroscience (SCN) track of the Cognition and Neuroscience program. Consult your Program Director on any issue relating to doctoral study, including information on program requirements, procedures and opportunities, assistantship assignments, and other student academic issues.
- 2. **Program Committees:** The CN and SCN tracks each have graduate committees made up of faculty and/or graduate student representatives that oversee the two tracks and graduate admissions. The respective CN or SCN Program Director is the chair of these committees.
- **3.** Academic Support Coordinators: Each track within the Cognition and Neuroscience PhD program has an academic support coordinator (ASC) who assists PhD students with course registration, completing administrative forms, and other needs as described in this Guide.

- 4. **Department Faculty**: The Cognition and Neuroscience PhD program involves two of the 3 BBS Departments: the CN track of the Cognition and Neuroscience PhD is primarily in the Department of Psychology and the SCN track is primarily in the Department of Neuroscience. Faculty in the two departments develop the PhD program's curriculum and requirements, advising and mentoring, and evaluation of student performance and progress.
- 5. Department Heads: The three major departments in BBS, Neuroscience, Psychology, and Speech and Language all have a department head (chair). These individuals (Dr. Shayla Holub for Psychology and Dr. Greg Dussor for Neuroscience) oversee budgets related to the graduate programs, oversee the operations of each department, and help to coordinate the academic degree programs.
- 6. **Research Advisor:** The research advisor is the primary faculty member with whom you will work; they will provide research mentoring, help you select courses, and carry out other responsibilities described in the "Advising" section.
- 7. Associate Dean for Graduate Studies: The Associate Dean for Graduate Studies (Dr. Robert Stillman) coordinates all BBS graduate programs. The Associate Dean also serves on the UTD Graduate Council and is the School's liaison with the UTD Dean of Graduate Education (Dr. Juan González).
- 8. Dean: The Dean (Dr. Steven Small) oversees all of the School's academic and research activities.
- **9.** Center Directors: Each of the School's six Centers has a director who oversees PhD student participation in its research and other activities. They are: Dr. Shoup at the Callier Center for Communication Disorders; Dr. Chapman at the Center for BrainHealth; Dr. Rugg at the Center for Vital Longevity; Dr. Maguire at the Center for Children and Families; Dr. Price at the Center for Advanced Pain Studies; and Dr. Kilgard at the Texas Biomedical Device Center.

Section 1.C PhD Program Facilities

Some offices, classrooms and research facilities of the School of Behavioral and Brain Sciences are located on the Richardson campus; others are located in the School's six centers. The Callier Center for Communication Disorders-Dallas, the Center for BrainHealth, and the Center for Vital Longevity are located near the campus of the UT Southwestern Medical Center at Dallas. The Center for Children and Families, the Center for Advanced Pain Studies, and the Texas Biomedical Device Center are located on the main campus. The Callier Center has a primary focus on speech, language, and hearing and includes research laboratories, clinical services, and educational programs for children and adults with a wide variety of communication needs. The Center for Children and Families offers clinical and community outreach activities organized around three initiatives: parenting healthy families, strengthening interpersonal relationships, and enhancing thinking and learning. The Center for BrainHealth emphasizes research activities in the areas of developmental disorders, clinical neuroscience, and aging. Research at the Center for Vital Longevity focuses on cognitive aging, age-related diseases affecting cognition, and factors which support successful aging. The Center for Advanced Pain Studies is pursuing lines of research aimed at alleviating suffering from pain and improving the lives of people with chronic pain and/or migraine. The Texas Biomedical Device Center aims to develop technologies to prevent injuries, detect impairments, and restore quality of life lost due to neurological injuries and disease. The Centers' collaborative arrangements with the UT Southwestern Medical School expand PhD student research opportunities including access to clinical populations and brain imaging and other research facilities.

Section 1.D Student Offices and Study Areas

Full-time doctoral students are eligible for shared office space or a carrel in a study area; space is available in several locations on the Richardson campus and the off-campus Centers. Students whose primary location is in an off-campus Center should contact their Program Director or appropriate Center administrator to request an office/carrel assignment. Because of the shortage of space, we cannot assure that all students will have office space. Students who do not need or use the space will be asked to relinquish it. Students whose office is located in one of the Centers, but who have Teaching Assistant (TA) responsibilities on the Richardson campus, may utilize shared space when holding office hours. There are currently 2 shared offices in each of the CRA, JO, and GR buildings available in the for TA's to use when meeting with students. The School does not provide computers or other equipment for the student offices and shared spaces.

Section 1.E eLearning

To access <u>eLearning</u>, students use their NetID and NetID password. Course materials for courses in which students are enrolled, and any course for which a student may be the Teaching Assistant, may be found on eLearning.

Section 1.F Compliance Training

Students who are appointed as Teaching Assistants or Research Assistants must complete Compliance Training. This training provides information regarding laws and policies applicable to the University of Texas at Dallas and how, as an employee, to ensure compliances with these laws and policies. Students appointed as a Teaching Assistant or Research Assistant for the first time must complete this training within 30 days of the appointment, and continuing TAs and RAs are required to take the training each year as a refresher. The training is completed online.

Section 1.G PhD Advising

1. Research Advisor

You will primarily work with your research advisor, who will provide you with mentoring in research, guidance in the selection of courses, assistance in preparing and updating your degree planning and Milestones Agreement forms, and career guidance. The research advisor supervises and must sign off on the student's qualifying proposals and papers and other documents submitted to the Department. In most cases, the research advisor will become the chair of the student's dissertation committee. All tenured system faculty are eligible to serve as research advisors including faculty in departments other than the one to which the student was admitted.

Occasionally, a student may wish to change research advisors. There are many reasons a student may seek a change. However, a change of research advisors should be carefully considered because starting in a new lab or new area can result in delays in meeting deadlines. You should seek the advice of your Program Director, Department Head, or the Associate Dean before initiating a change. There are also situations in which a research advisor may no longer wish to serve as a student's advisor. It is a faculty prerogative to withdraw as a student's research advisor.

Whether by student choice or faculty decision, a student who at any time lacks a research advisor for a semester will be dismissed from the program.

2. Registering For Courses

Before registration each semester students must meet with their research advisor to complete a registration form. After the research advisor has signed the form, the student submits it to their Academic Support Coordinator (Cognition and Neuroscience). The Academic Support Coordinator will register students online; students are not permitted to register themselves.

If you wish to add or drop a course, you must repeat the process starting with your research advisor. If there is a "Hold" on your student account (which could result from missing documents, unpaid fees, financial aid issues, or even an incorrect mailing address) you must resolve the problem before you can be registered. You should review your registration and payments regularly so that any errors can be caught and correctly quickly; you can do this by going to the <u>Galaxy online portal</u> on the UT Dallas webpage and accessing your Orion system account.

3. Degree Planning and Annual Reporting

Doctoral study in BBS includes a series of milestones. The key milestones include: 1) completion of core and advanced coursework, 2) development of proposals and completion of qualifying projects and papers, 3) preparation and defense of the dissertation proposal, and 4) completion and defense of the dissertation. Students will approach these tasks somewhat differently, but each step is critical toward completion of the degree. Timely achievement of each milestone is essential, and students who fall behind risk losing assistantship support or even being dismissed from the PhD program.

Degree plans for the CN and SCN tracks in the Cognition and Neuroscience PhD program, found on the program webpages, show when and how students expect to meet coursework and other requirements. Additional details can be found below in **Section 1** and **Section 2**. These forms also help the programs project the need for courses not offered annually. The student and research advisor initiate the degree plan; as a working document the degree plan is updated annually to reflect the student's developing research focus and career goals. The School offers many seminars on special topics, so it may not be possible to anticipate every aspect of a student's entire degree plan from the start. But a degree plan should be in place to specify how the student will meet coursework requirements and to indicate the timelines for meeting degree milestones. A final degree plan demonstrating completion of all program requirements must be filed along with the application for graduation.

In addition to the degree plan, the UT System requires that a Milestones Agreement Form be on file before the end of the student's first semester in the PhD program. The milestones agreement form officially informs students and their advisors of their progress in completing specific degree requirements. The student and research advisor must review, update and sign this form annually and submit it to the Program Director. The ASC will email the form to the student initially to begin this process.

Every spring, students will be notified by their Program Director that they must complete an annual report detailing their progress and accomplishments toward completion of the PhD, including coursework completed, teaching and research activities, professional papers and presentations, and achievement of program milestones. This information, along with independently gathered data on the student's academic, research, and assistantship performance, is incorporated into an annual evaluation that is used to advise the student and to make decisions about retention in the program and providing assistantship funding, as described below.

Section 1.H Criteria for Retention and Assistantship Funding (policy currently under review and subject to change)

The Department Faculty for each track in the PhD program meet annually to review the progress of PhD students. The quality of the student's performance, the rate of progress, and the likelihood of completing

the degree are the primary criteria used by faculty in these evaluations and students are notified by letter concerning whether their progress meets faculty expectations. In some cases, students may be given feedback including deadlines for completing specific requirements that they must meet in order to remain in the program. Students are encouraged to meet with their advisors periodically to discuss their progress and obtain informal feedback. Students whose progress is unsatisfactory risk suspension or loss of their assistantship and may be dropped from the program. Listed below are some of the standards considered in determining whether a student is making satisfactory progress.

1. Excellence in coursework:

PhD students are expected to excel in their coursework and to exceed the University's minimum grade-point average. Grades that are consistently at the minimum level may indicate unsatisfactory performance. The University requires that graduate students maintain a minimum overall grade-point average of 3.0; an overall GPA below 3.0 automatically results in academic probation and suspension of assistantship support. In addition, PhD students in BBS must maintain a cumulative GPA of at least 3.0 in their core courses and receive grades of Pass (P) in all independent study courses. Students should be aware that if the syllabus for a graduate course indicates that plus/minus grading will be used, a grade of B- will result in fewer than 3.0 grade points for that class. Students should also be aware that a grade of incomplete (I) will automatically revert to an F if not resolved within eight weeks after the start of the next semester. Although an incomplete may occasionally be unavoidable, repeated incompletes suggest unsatisfactory performance and may result in the student being dropped from the program.

With their advisor's approval, graduate students can retake up to three courses, one time each. Students can use the <u>Repeated Course Grade Adjustment</u> form to request that only their last grade in a repeated course be used in calculating their GPA. All repeated courses remain on the student's transcript.

2. Timely completion of all program milestones:

PhD students are expected to meet all deadlines and milestones concerning qualifying papers and projects and the dissertation. See below **Section 2** and **Section 3** for information about these milestones for the CN and SCN tracks, respectively.

3. Growth in research and professional skills:

Students are expected to demonstrate continuing progress in acquiring the specialized knowledge, research skills, and written and oral communication skills necessary to independently conduct high quality research and to communicate effectively to professional peers and students. All students are expected to be actively involved in faculty-supervised research and independent study throughout their program.

4. Fulfillment of all requirements of teaching and/or research assistantships:

Assistantship funding represents a privilege and a responsibility; students who fail to fulfill requirements of their assistantships risk losing their funding.

TA/RA Residency Policies:

• Students who accept a TA appointment must be available on campus for the duration of their appointment semester regardless of class modality or pool assignment. RA's, with the approval of their supervisor and approved off-campus work plan, may work remotely as long as they remain in Texas. RA's may not work remotely out-of-state or out of the country. International students have additional restrictions determined by the DHS. International RA's and TA's considering traveling outside the DFW area during any semester should contact the International Student Success Office to be sure they do not violate the terms of their visa.

- TA's or RA's who leave their positions before the end of their semester appointment risk being required to reimburse the University for the cost of the semester's tuition. The only exception is an approved medical leave. Students who receive individual grant funding (NIH F31, NSF GRFP) may initiate those awards in mid-semester with the approval of the Program Head.
- TA's who have completed all requirements for graduation before the end of the semester are, nonetheless, obligated to complete their semester-long assignment. RA's may request to be released from work obligations, but risk having to repay their tuition, if they leave before the semester has ended.
- Students who enroll for "Priority Graduation" are not eligible for TA or RA appointments.

5. Active participation in the intellectual life of the School:

Students are expected to attend area "brown-bag" seminars and public dissertation meetings, the School-wide Colloquium series, and lectures by visiting scholars including faculty candidates. All of these activities contribute to the BBS community and its culture of collaboration, enriching the intellectual experiences of students and faculty alike.

Students who find they are unable to meet deadlines or achieve expected standards because of personal or professional conflicts are encouraged to meet with their research advisor and Program Director as soon as they become aware of the problem. Options include requesting a leave of absence or declining assistantship support (with assurance that the support will be renewed in the future). A request for a leave of absence or deferral of an assistantship position, in lieu of withdrawal, requires administrative approval and cannot be assumed.

Section 1.I Leave of Absence

Students in good standing may request a leave of absence for personal or financial reasons. A brief memo to the Program Director, approved by the Research Advisor indicating the reason for requesting leave and the expected date of return should be submitted. Leaves may be granted to students in good standing for up to one year in consultation with the Program Director and Research Advisor. Extensions beyond a year may also be granted but require an annual request and reapplication to the University before the student returns. If the request for an extension is declined, reinstatement requires a new application to the doctoral program that will undergo competitive review with new applicants. Granting of leave-of-absence does not extend the 10-year limit for completing all requirements for the degree.

Section 1.J Scholastic Dishonesty

Scholastic dishonesty in any form is taken very seriously and the University has a formal judicial procedure for resolving allegations of scholastic dishonesty. Students are strongly advised to avoid any situation in which scholastic dishonesty might be suspected. Plagiarism is a form of scholastic dishonesty and each year several allegations of plagiarism occur. All students should carefully familiarize themselves with the University policy on plagiarism. This is especially important for international students who may be less familiar with the plagiarism standards at universities in this country. If you have questions, ask your research advisor, Department Head, or Academic Support Coordinator. Many faculty will require that papers be submitted through Turnitin.com, an online program which identifies similarities in prose with previously published materials. All dissertations must be submitted through <u>Turnitin.com</u>. Further information regarding scholastic dishonesty can be found here: http://www.utdallas.edu/conduct/dishonesty/.

SECTION 2 – COGNITIVE NEUROSCIENCE TRACK

The cognitive neuroscience track within the PhD program in cognition and neuroscience offers advanced study and research training for students seeking to become leading scientists and scholars in the field of cognitive neuroscience. Research in cognition and neuroscience encompasses all aspects of cognition, including studies of perception, memory, reasoning, decision-making, neuroplasticity and neuro-engineering.

The cognitive neuroscience track offers a distinctive blend of research initiatives and doctoral study in the neural processes underlying sensation, perception, memory, learning, language, and executive function throughout the lifespan. Students may focus, for example, on perception and memory for complex information patterns such as faces, speech, language, music, and text, or reasoning and decision-making processes in conditions such as brain damage and addiction. Finally, the program has unique strengths in artificial neural networks and neuro-engineering.

Section 2.A CN PhD Curriculum

PhD degrees at UT Dallas require a minimum of 75 graduate credit hours. The curriculum for each PhD program consists of a General Core, a Major Field/Area Core, Advanced courses, Independent Study/Research, and the Dissertation.

The **General Core**, required of all PhD students, has two components. One is the **Doctoral Proseminar** (HCS 6302), a 3-credit course that introduces students to the faculty and research domains in the School and addresses the many issues related to successful doctoral study and career development. The Doctoral Proseminar is supplemented by a School-wide colloquium series featuring internationally known scientists, as well as by area-specific brown-bag seminars, which include presentations by students, faculty, and researchers visiting from other universities. Students are expected to attend their area "brown bags" and all of the BBS colloquia; all of these are announced on the BBS webpage and through emails to students.

The other component of the General Core comprises 6-9 credits of **Research Methods and Statistics courses** that provide a foundation in the research design and statistical analyses that are important for research in Behavioral and Brain Sciences. Most students will be required by their research advisor or dissertation committee to take additional advanced coursework in research design, statistics, or other research tools relevant to their research.

1. Course list

A brief list of the coursework required for the CN Track is shown below; see also the UT Dallas <u>Graduate</u> <u>Catalog</u>. The University's course look-up page, <u>CourseBook</u>, provides more detail on the scheduling of the specific courses listed below.

Cognitive Neuroscience Track

Doctoral Proseminar	HCS 6302 Issues in Behavioral and Brain Sciences
Research Methods & Statistics	HCS 6312 Research Methods in BBS – Part I
	HCS 6313 Research Methods in BBS – Part II
Major Field/Area Core	HCS 6330 Cognitive Science OR HCS 6395 Cognitive Psychology
	HCS 6346 Systems Neuroscience OR 6338 Functional Neuroanatomy
	(for students entering prior to Fall 2024)
	HCS 6346 Systems Neuroscience AND 6338 Functional Neuroanatomy

Advanced Electives

(for students entering Fall 2024 and after)

Minimum of 9 HCS credit hours selected by student with approval of research advisor. An area core course can count as a core course or as an advanced elective, but not both. Depending on a student's background and research interests, additional advanced electives may be necessary.

2. Waiver of Coursework Requirements

Students who enter the PhD program having successfully completed graduate coursework relevant to degree requirements may seek approval from the Department to waive specific courses. Students should submit such a request to their Program Director and attach the syllabus from the equivalent course taken previously. Generally, only courses in which a grade of A was earned will be considered, and the Program Director may require that another course be substituted for the waived course.

3. Transfer of Credit

Transfer of credit from another university is necessary only for PhD students who enter the program with extensive in-field, graduate coursework. Currently, students can request that up to 36 credits of graduate coursework completed elsewhere, with grades of B or better, be transferred toward PhD degree requirements. Those courses do not require a formal credit transfer request. To request a transfer of credit to substitute for a program requirement, the student must complete the <u>Transfer of Credit Request</u> and provide the Academic Support Coordinator with catalog course descriptions documenting the equivalence between courses taken elsewhere and UT Dallas courses. The Department, the BBS Associate Dean for Graduate Studies, and the Registrar must approve all requests and approval should not be assumed. Transfer of credit from international universities can be problematic because of different systems of awarding credit and grades. Acceptance of transferred credit hours will not occur until after the student has completed 9 semester credit hours at UT Dallas with a grade point average of at least 3.0, and all petitions must be processed and approved no later than the semester prior to the one in which the student applies for graduation.

4. Enrollment Policies

Minimum enrollment for RAs and TAs is 9 semester hours for Fall and Spring. Summer enrollment requirements are determined each summer by the UT Dallas Provost and vary from year to year. In some summers, students will not enroll unless they are taking an organized course, graduating, or meeting a major milestone. In other summers, students will be required to enroll for up to 6 hours. Your ASC will inform you prior to registration of the number of summer hours in which you will enroll.

The number of hours in which you are enrolled in summer do not change any of the requirements and responsibilities of your assistantship. If you accept an assistantship in summer you must meet all of the obligations of the position regardless of the number of hours in which you are enrolled. Students who have been informed not to enroll during the summer continue their TA or RA appointments and remain eligible for University health insurance.

5. Enrollment Related to Graduation

All students must be enrolled in the semester(s) in which they defend and graduate. Students participating in Priority Graduation are exempt from enrolling in their graduating semester provided they

meet Priority Graduation requirements. Self-funded students may enroll for 1-credit in their graduating semester. The 1-credit option can only be used once. Other than this exception, self-funded students must enroll for a minimum of 3 credits. Funded students enroll for 9 hours in their graduating semester or the number of hours specified by the Provost for summer graduation.

Students must complete a graduation application for the semester in which they intend to graduate. Online graduation applications are available only through your Department's Academic Support Coordinator. The graduation application triggers the appointment of the outside chair for your dissertation defense. Your defense cannot be scheduled until an outside chair has been appointed.

Students planning to defend their dissertation in the summer should complete their graduation application by the start of the long summer session. Finding an outside chair for a summer defense can be difficult and students who apply late risk having their defense delayed.

Section 2.B Master's Degree en Route

Because of overlapping requirements, PhD students in Cognition and Neuroscience may simultaneously seek a Master of Science (M.S.) degree in Applied Cognition and Neuroscience. Students interested in the dual degree program must complete a master's degree plan approved by Dr. Richard Golden, the Program Head in Applied Cognition and Neuroscience, showing how they will meet the coursework and research requirements for the M.S. degree. Students must submit a <u>Graduate Change of Program Request</u> in order to matriculate into the master's program no later than the semester prior to the semester in which the degree will be conferred. Students cannot be considered for a master's degree *en* route until they have been matriculated into that degree program and have a degree plan for that program on file. Please contact <u>Melanie Davis</u> (ACN) or <u>Alice Presti</u> (Cognitive Neuroscience track) for specific information and procedures.

Section 2.C Qualifying Papers and Projects Overview

Students in all BBS PhD programs must complete a set of qualifying papers and projects before they can defend their dissertation proposal and advance to Ph.D. candidacy. These qualifying papers and projects take the place of a PhD qualifying examination. Through their qualifying papers and projects students demonstrate mastery of the literature in their field, competence in research processes and methods, and written and oral communication skills commensurate with professional standards in the discipline. *Because professional writing skills are considered in evaluating all qualifying papers, students who cannot effectively communicate their findings may fail to have their papers accepted, regardless of the strength of their finding. It is essential that students with poor written communication skills seek outside tutoring or instruction. Research advisors may offer suggestions to enhance the content and organization of papers but they cannot be expected to devote time to improving poorly constructed prose.*

Two qualifying plans are described below, as the degree milestones were changed in 2020. Students previously admitted to Cognitive Neuroscience track prior to or during Fall 2020 could, with their research advisor's approval, select either "Qualifying Plan 1" (i.e., Qualifying Thesis) or "Qualifying Plan 2" (i.e., Research Project + either Literature Review or Grant Proposal). Students admitted to Cognitive Neuroscience track during or after Fall 2020 will follow the updated Qualifying Plan 2, now termed "Pre-Dissertation Portfolio" (i.e., Research Project + either Literature Review or Grant Proposal). As Qualifying Plan 1 is no longer an option for new students, it will only be described briefly below.

Section 2.D Qualifying Plans admitted prior to or during Fall 2020

2.D.1 Qualifying Plan 1: Qualifying Thesis (no longer available to incoming students)

Plan 1 consists of a Qualifying Thesis, which is a research project supported by an extensive literature review, that takes the form of a published journal article. The Qualifying Thesis resembles but is less comprehensive than the dissertation; it is guided and evaluated by a faculty committee chaired by the student's research advisor that includes at least two other faculty members with expertise relevant to the project. The committee provides feedback in the design, conduct, and write-up of the study and is responsible for evaluating the final product, which must be completed during the fall semester of the student's third year in the PhD program. See <u>Overview of Qualifying Plan 1</u> for a summary of key events and deadlines for completing Plan 1, including prospectus, committee formation (<u>Qualifying Thesis</u> <u>Committee Membership Form</u>), thesis proposal and defense (<u>Qualifying Thesis Proposal Approval Form</u>), project and thesis completion, thesis final defense (<u>Qualifying Thesis Final Approval and Public</u> <u>Presentation of Research Project</u>). Anticipation of any potentially missed deadlines should result in a <u>Request for Extension</u>.

2.D.2 Qualifying Plan 2 (i.e., Research Project + either Literature Review or Grant Proposal) described below.

Section 2.E Pre-Dissertation Portfolio for Cognitive Neuroscience admitted during or after Fall 2020

The Pre-dissertation Portfolio has two milestones, one is fixed, and the other has two options from which students can select. The two milestones can be completed in any order, but both must be completed as the Pre-dissertation Portfolio by the end of the second year (i.e., in May). One (fixed) component consists of an empirical research project supervised by the research advisor. The second component requires the student to demonstrate substantive knowledge of the research literature in one of two ways: by writing an integrative literature review OR by writing a substantive grant application. The two components are described below, followed by a description of the evaluation process that applies to all projects.

Students and their mentors will work on the milestone 1 and 2 over the course of the first two years and will determine the order and timing for work on each milestone. The final deadline for completion of both milestones is May 1st of the 2nd year. This deadline will be enforced, and <u>Request for Extension</u> will only be given in unusual circumstances. See <u>Overview of Pre-Dissertation Portfolio</u> for a summary of key events and deadlines. Students will check in with the Graduate Steering Committee* (GSC) at various touchpoints outlined below.

*The GSC is a program-level committee in which members rotate off every 2-3 years. Program Directors chair the GSC for their program. The committee checks in at several points in the year to make sure students are making progress, reviews the projects that have been proposed to make sure that they are all around the same level of scope, and meets with students who are struggling in May/June after milestone projects are due to help them develop a growth plan for moving forward.

2E.1 Milestone 1: Research Project: This research project is an empirical study, designed and conducted by the student, that usually has its roots in work being conducted in the research advisor's lab. The study's scope should be sufficiently narrow to enable it to be completed in less than 1 year (i.e., ideally 7-8 months), but sufficiently comprehensive to demonstrate the student's research skill in their field of study. The completed study is written up in journal format for evaluative review and will be submitted and ideally accepted for publication, although this is not required.

<u>Milestone 1a:</u> Research Project Proposal will be developed with the advisor (2-5 page document outlining rationale and methodology for the project). Approved by research advisor ("first-reader") and submitted to the Academic Support Coordinator by February 15th of the first or second year (depending

on milestone order) for review by the GSC. The GSC will ensure that the project can be completed as described in the time allotted and will seek additional reviewers if needed.

<u>Milestone 1b:</u> Research project submitted in manuscript form to the ASC by May 1st of the 2nd year, suggesting two relevant faculty reviewers. The GPC will send for second-reader review (which may or may not be the reviewer suggested) who will complete a rubric and provide feedback on the project. Students respond to the reviews in letter form (similar to response to reviewers for journal submission) and revise the manuscript where appropriate. Revisions will only be re-reviewed when requested by the GSC. The final version of the research project manuscript must be approved by the Graduate Steering Committee during the fall term of the second year, unless a <u>Request for Extension</u> has been submitted and the Graduate Studies Committee has approved an alternative deadline.

<u>Milestone 1c</u>: Presentation. The final step in completing the research project component is for the student to present the research to fellow students and faculty as a "brown-bag" session (usually the Psychology Lecture Series) during the same semester in which the project was approved (if no availability, the following semester can be considered). The brown bag requirement is intended to give students experience in public presentation prior to the dissertation proposal defense. It is also a way to disseminate information to faculty and students regarding doctoral student research within the school. Performance in the presentation will not affect acceptance of the written project, but students should request feedback that will help to develop presentation skills. The student should contact the "brown bag" coordinator to schedule the presentation. After the presentation the student submits a signed <u>Public</u> <u>Presentation of Research Project</u> to the Academic Support Coordinator.

2E.2 Milestone 2: Grant Proposal or Integrative Literature Review. The student, under guidance of the research advisor, will prepare either a) a grant application OR b) an integrative literature review.

2E.2.a) The grant application component provides students with experience in analyzing and synthesizing the research literature and in developing the rationale, literature review, and design of a potentially fundable study. The grant proposal requires the student to work with the research advisor to develop a pre-proposal defining the scope and research goals of the grant application and the organization from which funding will be sought, typically a major Federal agency such as the National Institutes of Health (NIH) or the National Science Foundation (NSF). A proposal to submit an application to a different agency or organization will require clear justification and a copy of the agency's proposal instructions to ensure that the funding mechanism is sufficiently broad in scope to meet the requirements of the qualifying project.

Milestone 2.a. The student must submit the grant pre-proposal (1-2 pages, detailing the scope and research goals of the grant and the agency targeted), approved by the research advisor, to the Academic Support Coordinator by February 15 of the first or second year in the program (depending on milestone order), and the Program Director must approve the grant pre-proposal before the student begins to write the full grant proposal.

Milestone 2.b. The student must submit the completed grant application and two suggested faculty second readers, with approval from the research advisor, to the Academic Support Coordinator by **May 1 of the second year in the program**, for evaluation by the GSC as described below. The grant application must be rated "Acceptable" by the GSC by the end of the **fall semester of the third year in the program** unless a <u>Request for Extension</u> has been submitted and an alternative deadline has been approved by the Committee. For grant applications to agencies that that require a very brief literature review, the Committee may require the student to submit a more comprehensive supplemental literature review and references in order to demonstrate mastery of the relevant research literature. Students are encouraged to work closely with research advisors to submit their grant proposals to the relevant agency

for consideration of funding long before the due dates established by the program. However, submission to the NIH NRSA program or other pre-doctoral grant program is not a requirement and has no impact on whether the student passes this milestone.

2E.2.b) The <u>integrative literature review</u> is an original critical analysis of an important research topic, written in accordance with the publication guidelines of a prominent journal (i.e., usually less than 5000 words). in a relevant field (e.g., *Trends in Cognitive Science, Neuroscience and Biobehavioral Reviews*) and demonstrating rigor, scope, and originality commensurate with publication. The review should be based on independent thinking and should be sufficiently original that it advances knowledge in the field; it should <u>not</u> simply organize and summarize existing knowledge but should provide a novel perspective that constitutes a genuine contribution to the field.

Milestone 2.a. The student will work with the research advisor to develop a prospectus (2–3 pages long) defining the topic and scope of the integrative review, conveying the goals of the paper, the domain of literature to be reviewed, and relevant citations. It must also indicate the particular journal model the student is following (e.g., *Psychological Review, Psychological Bulletin, TICS*, etc.). After the research advisor approves the proposal, the student must submit it to the Academic Support Coordinator no later than **February 15 of the first or second year in the program (depending on milestone order)** for review and approval by the Program Director.

Milestone 2.b. The student must submit the completed integrative literature review, with approval from the research advisor, to the Academic Support Coordinator by May 1st of the first or second year (depending on milestone order). Two faculty reviewers, suggested by the student and approved by the GSC, complete a rubric and provide feedback. Students respond to reviews in letter form (similar to response to reviewers for journal submission) and revise the manuscript when appropriate. This will only be re-reviewed when requested by the GSC. The integrative literature review must be rated "Acceptable" by the Graduate Steering Committee by the end of the **fall semester of the third year in the program** unless a <u>Request for Extension</u> has been submitted and an alternative deadline has been approved by the Committee.

2.E.3. Evaluating Milestones: Research Projects, Integrative Literature Reviews, Grant Applications

Pre-dissertation components are all evaluated using a consistent process, which begins with an evaluation by the student's research advisor as the "first reader." After the first reader approves the manuscript the Graduate Steering Committee designates another faculty member as a "second reader" who will evaluate it independently using a rubric. If there is substantial disagreement between the first and second readers the Graduate Steering Committee will appoint a third reader to evaluate the paper.

To maintain the integrity of the review process, second and third readers are anonymous. Students may not attempt to contact a reader unless the reader has agreed to be identified on the Graduate Steering Committee's memo to the student, in which case the student is free to consult with the reader concerning the review and any suggested revisions.

The Graduate Steering Committee uses the readers' evaluations to assign the paper one of the three ratings:

"Acceptable" means that the student has clearly met the criteria established for successful completion of the research project, although minor editorial changes may be required. After making these changes the student must submit the revised manuscript for final review and approval by the GSC.

For projects rated "Acceptable with Revisions" the GSC will provide the student with written

recommendations for revising the paper; the student must submit a revised manuscript with a detailed cover letter that indicates where the revisions have been made and/or full explanation of why recommended changes were not made. The revised paper is then reviewed and rated again by the second reader and the Graduate Studies Committee. The process repeats as needed until the Graduate Studies Committee rates the project as "Acceptable."

For projects rated "Not Acceptable" the GSC will provide the student with written recommendations concerning a course of action for a different submission. If the student receives a rating of "Not Acceptable" on the second submission he or she will be subject to dismissal from the program, regardless of whether the re-submission is on the same or different topic or whether the research advisor is the same or a different member of the faculty.

Each pre-dissertation component must be rated "Acceptable" by the Graduate Studies Committee by the end of the semester in which it is due, and students must adhere to all deadlines unless a <u>Request for</u> <u>Extension</u> has been submitted and an alternative deadline has been approved by the GSC. Students should note that the Graduate Steering Committee makes every effort to rate papers within a month, but ratings may be delayed significantly if papers are submitted at times when faculty are unavailable, such as near holiday breaks or during the summer term. The submission deadlines are designed to avoid such delays.

2.E.4. Prior Graduate Thesis Credit. Students who have completed a master's thesis prior to enrolling in the PhD program may request a waiver of the research project requirement, but it should not be assumed that a previous master's thesis will be accepted in lieu of the research project or any other doctoral requirement. To be considered for a waiver, submit a copy of the thesis to the Graduate Steering Committee, which will evaluate it using the same criteria applied to research projects and will consider whether the thesis adequately demonstrates research competence commensurate with that required for a dissertation in the student's area of interest. Some master's theses will not meet this important criterion. In addition, some research advisors require students to complete a research project in the area in which they plan to conduct their dissertation research.

2.E.5. Pre-Dissertation Portfolio Review: During the annual student assessment meeting in May, the faculty will review the portfolios of all 2nd year students to ensure continuation in the program. This will include the two milestones outlined above, coursework, and work as a TA/RA. Concerns will be mitigated by the GSC, which might include some form of remediation or discontinuation from program with a master's degree. Students will be notified by the Chair of the GSC in writing if remediation is required.

2.F. Dissertation: The dissertation milestones (below) are modified slightly with some updates to deadlines and additional oversight by the Graduate Steering Committee.

Milestone 3a: Dissertation Committee and Prospectus. The student should write a 2-3 page prospectus to invite faculty to join the committee. Students should hold meetings with their committee as needed and are encouraged to do so early on in project development. The prospectus and committee form are submitted to the Academic Support Coordinator. Due by December 1 of the 3rd year.

Milestone 3b: Dissertation Proposal. The dissertation proposal is a comprehensive document outlining the proposed dissertation project. It includes a rationale, statement of the problem, specific hypotheses, discussion of relevant literature, methodology and procedures, a plan for statistical analysis, and when appropriate, pilot results. The student can propose a traditional dissertation project or, if they have a large corpus of independent research, can propose a "three first-authored paper" dissertation. The committee approves the proposal document before scheduling the proposal defense. Due by May 1 of the 3rd year.

Milestone 3c: Public Dissertation Proposal Defense. The student should defend the dissertation proposal by Dec 1 of the 4th year.

Milestone 3d: Public Dissertation Proposal Defense. Scheduling Final Oral Exam (Dissertation Defense). After completing the project, students should submit their final dissertation to their committee for feedback and approval. Student should successfully defend their dissertation ideally in Spring, but by Summer at the latest, of their 5th year.

Section 2.F The Dissertation

The <u>Office of Graduate Education</u> summarizes requirements and deadlines for completing the dissertation. The information below provides more detailed information on the dissertation for PhD students in BBS.

1. Dissertation Committee

The **dissertation committee** oversees and assists the student in developing a dissertation proposal and conducting the dissertation research; the committee also reviews and evaluates the written dissertation and the Final Oral Exam (dissertation defense). To form a dissertation committee, the student works with the research advisor to identify at least four potential committee members from among the BBS faculty. One of these four, the Chair, must be a tenured or tenure-track faculty member in BBS. Occasionally a student may wish to appoint a co-chair from another university (e.g., if the student plans to conduct a substantial amount of the dissertation research in that off-campus lab) or a non-tenure track faculty member who has relevant expertise. However, the student should recognize that scheduling committee meetings and obtaining signatures can be difficult when committees include off-campus members. <u>UTDPP 1052 Procedures for Completing a Graduate Degree</u> provides details on appointing non-UTD and non-tenure system faculty to dissertation committees.

Students may form a dissertation committee whenever they choose, but they are not permitted to submit the dissertation proposal to the committee until the proposed members have been approved by the BBS Graduate Studies Committee and by the UT Dallas Dean of Graduate Education. To do this, the student must submit a signed <u>Committee Appointment Form</u> and a 1-2 page prospectus of the dissertation with reference citations to their Academic Support Coordinator for review by the BBS Graduate Studies Committee may choose to add an additional committee member if they feel additional expertise is necessary to effectively guide and evaluate the student's research. Final approval of the dissertation committee by the UT Dallas Dean of Graduate Education is required before the student submits the dissertation proposal to the dissertation committee for review.

2. Dissertation Proposal

The **dissertation proposal** is a comprehensive prospectus for the dissertation. It includes a rationale, statement of the problem, specific hypotheses, discussion of relevant literature, methodology and procedures, a plan for statistical analysis, and when appropriate, pilot results. It is generally assumed that the student will have completed relevant research with the supervising professor and that the dissertation proposal is an outgrowth of that research. Although preparation of the dissertation proposal is overseen by the dissertation Chair, it is important to keep other members of the committee informed of progress and, where appropriate, to invite their critique of the rationale, design, and proposed methods of data analysis. Once formed, the dissertation committee must meet at least once/year to review the student's progress toward completion of the proposal and final dissertation.

If previously collected data, either archival or collected by the student, is to be used in the dissertation, the source of the data must be divulged to members of the dissertation committee in the proposal and at the proposal defense. This does not include pilot data used to justify the project, but it does include any data collected before the proposal defense that the student intends to include in the dissertation. Students

should be aware that the dissertation committee may question the validity of archival and prior collected data and have the authority to reject these data. For that reason, students should inform committee members early of the source of their data and not continue to collect data that committee members view as potentially flawed.

When the proposal is completed, the student presents the proposal to all members of the dissertation committee for review. When the committee members are satisfied with the proposal including, where applicable, the use of previously collected data, and believe the student is ready to be formally evaluated by the School's faculty, they will sign the <u>Dissertation Proposal Meeting</u> form requesting a public defense of the dissertation proposal. The student submits this form and the approved dissertation proposal to the Academic Support Coordinator.

a. Scheduling the Dissertation Proposal Defense

The Academic Support Coordinator schedules the dissertation proposal defense at the request of the dissertation committee Chair. All faculty and students are invited to attend the dissertation proposal defense, and the faculty must be notified of it at least two weeks in advance. The student must also submit a copy of the dissertation proposal to the Academic Support Coordinator at least two weeks in advance of the defense for faculty members who wish to review it. The dissertation proposal defense may be scheduled only on days when the Academic Calendar shows that classes are in session – not on University holidays, Reading Days, Final Exam Days, or between semesters. All students are expected to defend their PhD dissertation in person in a public setting.

In no case may the public defense of the dissertation proposal take place until the student has passed all qualifying paper and project requirements including brown bag presentations, and the Graduate Dean has approved the dissertation committee. For PhD students working in Cognition and Neuroscience - Cognitive Neuroscience track, and Psychology, the dissertation proposal defense should be held no later than Fall of the student's 4th year.

b. Format of the Dissertation Proposal Defense

To begin the dissertation proposal defense the student presents the background and goals of the proposed research and the methods to be employed. The student then answers questions from members of the dissertation committee and others in attendance. Following the conclusion of questions, all members of the faculty in attendance vote on whether the student demonstrated mastery of the theoretical issues and empirical findings in his or her field of specialization and was able to present and defend the proposed dissertation research in a manner commensurate with the PhD degree. Faculty in attendance may offer recommendations to strengthen the project; although the student and dissertation committee are not bound to accept them it is assumed that these recommendations will be given careful consideration. Passing the dissertation proposal defense is by vote of the majority of faculty in attendance; the conducting chair records the vote, and voters record their names and signatures, on the <u>Public Presentation of Dissertation Proposal Form</u>. The student submits this signed form to the Academic Support Coordinator; the form is then sent to the UT Dallas Dean of Graduate Education along with a letter from the School stating whether the student passed the dissertation proposal defense.

Students who fail the first dissertation proposal defense are permitted to use the same procedures to schedule a second dissertation proposal defense that must be held before the end of the following semester. Students who fail the dissertation proposal defense a second time or do not hold the second defense before to the end of the following semester will be dismissed from the PhD program.

3. Dissertation Defense

a. Scheduling the Final Oral Exam (Dissertation Defense)

After passing the dissertation proposal defense the student carries out the dissertation under the

supervision of dissertation committee Chair with assistance from other committee members. The student writes the dissertation manuscript according to guidelines available at the <u>Office of Graduate Education</u> <u>website</u>, and submits the manuscript to the dissertation committee for review. When the dissertation manuscript is approved by a majority of the dissertation committee, the student emails the Academic Support Coordinator to schedule a room for the Final Oral Exam. The student then completes the <u>Request for Final Oral Examination</u> form and obtains signatures of all the committee members. The student will submit this form, the dissertation, and an unsigned formatted signature page to the <u>Thesis and Dissertation</u> <u>Submission website</u>. A Graduate Reader will review the dissertation for formatting and email the student with necessary corrections. Students should review the <u>Checklist for Final Submission of Doctoral</u> <u>Dissertation</u> on the Office of Graduates Education site for information and deadlines concerning review, approval and submission of the final dissertation document. Enrollment information related to the semester of the defense can be found above in Section 2.A.5.

b. Format of the Final Oral Examination (Dissertation Defense)

The final oral examination is administered by a faculty member appointed by the Graduate Dean and is open to the public. Students should review the <u>Thesis and Dissertation Guide</u> available on the <u>Office of Graduate Education</u> website, as well as the <u>Policy on Procedures for Completing a Graduate Degree</u> (<u>UTDPP1052</u>). When the student passes the defense, he or she obtains the signatures of the dissertation committee members on the original signature page. The student will then upload the signed signature page to the <u>Thesis and Dissertation Submission website</u> and follow the submission directions on the <u>Checklist for Final Submission of Doctoral Dissertation</u> on the Office of Graduates Education site. All students are expected to defend their PhD dissertation in person as of August 2023.

Section 2.G Support for Doctoral Study (Policy currently under review and subject to change)

1. Graduate Assistantships:

Financial support for full-time doctoral study is available in the form of teaching and research assistantships. Teaching assistants are appointed by the Graduate Studies Committee while research assistants are appointed by individual faculty PIs. The number of teaching assistantships available each year is determined by the annual budget while the number of research assistantships depends on the funding of faculty extramural grants.

Each Teaching and Research Assistantship carries an obligation to provide 20 hours/week of work outside of work done for course credit or independent study and research. Although an assistantship is considered a half-time position, full-time students are expected to give full-time effort to graduate study and research including fulfilling the obligations of their assistantship. Should a student need to leave their assistantship in the middle of the semester, they must immediately notify their Program Head, the Associate Dean of Graduate Studies (Dr. Robert Stillman), and Program Manager (Michelle Blazewicz). Leaving midsemester for reasons other than health emergencies may result in the student being asked to repay their tuition scholarship to the school.

All students funded by teaching and research assistantships are awarded tuition scholarships covering the cost of tuition and fees (resident and non-resident). These scholarships cover a maximum of 9 credits in the fall and spring semesters. The scholarship covers a maximum of 6 hours for students who need to enroll in the summer. Students wishing to enroll in more than the standard number of credits in a semester may have to pay tuition and fees for the additional credits.

2. Teaching Assistants:

Teaching Assistants (TAs) are appointed expressly to contribute to the instructional activities of the School. TAs participate in the TA "Pool" for 10 hours/week; they spend the remaining 10 hours/per week carrying out various assignments under the supervision of the research advisor. Students are assigned to

assist instructors in specific BBS courses, typically large undergraduate core classes, classes with associated laboratories or discussion sections, or classes requiring extensive office hours and student tutoring. TA assignments vary depending upon program needs and the skills and experience of the student. Course instructors determine the specific responsibilities of their TAs, and students may be assigned limited direct teaching responsibilities under the supervision of the course instructor. Students who wish to have more extensive teaching experience including responsibility for full courses should contact their Department Head or the undergraduate program head for the program in which they are interested in teaching. Because students assigned to teach full courses are expected to devote 20 hours/week to their teaching-related activities they are not also assigned 10 hours/week to their research advisor.

Students are notified by e-mail of their TA assignment before the start of each semester. Attempts are made to assign students in areas related to their interests but depending on School needs there may be occasions when students are assigned as TAs to courses outside their discipline. Students are provided sufficient guidance to perform well in these roles.

Each semester, one or more students are assigned to the "extra duty TA pool." Students in the extra duty pool are not assigned to specific courses but are on call for 10 hours/week to proctor exams and handle clerical and other work related to courses. Michelle Blazewicz, Program Manager, supervises the extra duty TA pool and will directly contact students as needed.

When students receive their TA assignment, they should contact the faculty member to whom they are assigned. Any time conflict regarding your TA responsibilities and the courses in which you are enrolled need to be resolved quickly. In such an event, contact Dr. Stillman and Michelle Blazewicz.

Teaching assistantships are awarded on a 9-month basis. Opportunities for teaching assistantships in the summer depend upon need in particular coursework areas, student progress, and available funds. If you do not plan to be here during all or part of the summer or prefer to relinquish your duties in order to concentrate on completing your projects, inform Dr. Stillman and Michelle Blazewicz. Students planning to spend time off campus that would interfere with summer term TA or RA duties should not request summer support, as the performance of TAs and RAs is evaluated and a failure to meet assistantship obligations could affect future assistantship support. Contact your Department Head if in doubt about your summer schedule. Students not assigned as TAs or RAs during a summer term remain eligible for re-appointment in subsequent semesters.

3. Research Assistants:

Research Assistants (RAs) are selected by and assigned to specific faculty-initiated extramural grants, and RAs are not obligated to serve in the TA Pool. The specific assignments and responsibilities of RAs are decided by the grant's Principal Investigator but usually include participation in research as well as the clerical duties that support research.

4. TA and RA Salaries and Appointments:

The salary of TAs is set by the School. The salaries of RAs are set by the Principal Investigator of the grant to which the student is assigned and equal to or exceed TA salaries.

Students supported on RA positions lost through expiration of a grant are typically offered TA positions if they are in good standing and making acceptable progress toward the degree. However, the salary of students transferred to TA positions will be at the TA rate rather than at the rate the student earned as a RA.

TAs and RAs are appointed from August 16 to December 31, from January 1 to May 15, and from May

16 to August 15. Appointments run the duration of the semester. Students who are appointed as a TA are committing to supporting the course to which they are assigned for the length of the semester. Any RA or TA who leaves the program while a semester is in session not only forfeits the monthly stipend from that date forward but may be retroactively charged for that semester's tuition and fees assessments.

5. Renewal of Assistantships:

Annual renewal of assistantship support depends upon student progress, timeliness in meeting program milestones, and the availability of assistantship funds. The School strives to provide funding for students for 5 years which the faculty considers to be sufficient to complete the degree. Any funding beyond 5 years requires the submission of a request for post 5-year funding (link to form.) Post 5-year funding is granted only to students nearing completion or where unforeseen circumstances have resulted in a delay in data collection or analysis. Post 5-year funding requests must be clearly justified and approval is subject to the availability of surplus funds and is not always granted. Request for post 5-year funding require the approval of the Department Head and the Dean of the School.

Students or faculty may request transfer of assistantships from an RA to a TA or TA to RA at the end of a semester. The Program Manager, Michelle Blazewicz, should be notified of any RA/TA status changes no later than 4 weeks prior to the start of a semester (first day of classes). Notifications made after this date will be subject to review and may not be approved. Research Assistants are selected by a grant's Principal Investigator (PI). A student may choose to decline a PI's request for RA appointment and opt for a TA position in consultation with the Program Director.

6. Assistantship Responsibilities During Semester Breaks:

TA duties normally extend from 4 working days before classes begin through the last day of final exams, but TAs for courses with final exams that occur late in the exam period are required to work until grading is completed or the due date for submitting final grades to the Registrar. These dates are published in the University's official Academic Calendar each semester. Variations to this schedule must be approved by the student's research advisor, the instructor of the course for which the student is a TA, and the Department Head.

RAs may be expected to follow the University's Human Resources Staff Calendar rather than Academic Calendar, which results in shorter intersession breaks. To avoid misunderstandings, RAs should check with their supervisors early each term to clarify expectations about working during intersessions.

TAs planning travel (other than approved travel to professional meetings) that might interfere with their duties must receive approval in advance from their Department Head. RAs planning such travel must receive approval in advance from the Principal Investigator of the grant. Students should not make travel arrangements or purchase tickets before the absence has been approved.

As noted above, students anticipating extended absences during the summer sessions should not seek TA support, even if the travel is in conjunction with data collection for dissertation research. All TAs are expected to be available for the duration of the summer sessions whether they are assigned to a course or to the extra-duty TA pool.

The University does not permit students supported as TAs or RAs be employed elsewhere. Doctoral study can cause both financial and personal strains, but it is in everyone's best interest for students who feel unable to devote full time to their studies and assistantship obligations to resign their assistantships and shift to part-time status, or to seek a leave-of-absence. In general, students in good standing who temporarily resign their assistantship may be reappointed when they return to full-time status.

TAs and RAs must sign the TA/RA Responsibilities form before they begin their assistantship.

Additional information on graduate assistantships is available at the <u>Office of Graduate Education</u> site, including University policies related to graduate assistantships, <u>UTDPP1075</u>.

7. Other Grants and Scholarships:

Students are strongly encouraged to apply for pre-doctoral grants and fellowships as well as private scholarships for which they may be eligible. Students awarded Federal pre-doctoral fellowships receive supplemental travel funds and other financial benefits from the School in recognition of their achievement. In no case will such a student receive less salary support than a TA, regardless of the terms of a Federal pre-doctoral award. There are also scholarships funded by School endowments for which PhD students are eligible. There will be a call for applications each spring and students are encouraged to apply.

SECTION 3 – SYSTEMS AND CELLULAR NEUROSCIENCE TRACK

The Systems and Cellular Neuroscience (SCN) Track in BBS focuses on neurobiological approaches in neuroscience, including molecular, cellular, and systems approaches in *in vitro* models, *in silico* models, animal models and humans. Research foci include learning and memory, stress, addiction, and pain. It is centered in our Department of Neuroscience. New students can rotate through multiple research laboratories or directly join a laboratory.

All SCN-specific forms referenced below and associated with the SCN track can be found on the Blackboard/eLearning "BBS – Systems Neuroscience" site under "My Organizations."

Section 3.A SCN PhD Curriculum

PhD degrees in BBS require a minimum of 75 graduate credit hours. The curriculum for each PhD program consists of a General Core, a Major Field/Area Core, Advanced courses, Independent Study/Research, and the Dissertation.

The **General Core**, required of all PhD students, has two components. One is the **Doctoral Proseminar** (HCS 6302), a 3-credit course that introduces students to the faculty and research domains in the School and addresses the many issues related to successful doctoral study and career development. The Doctoral Proseminar is supplemented by a School-wide colloquium series featuring internationally known scientists, as well as by neuroscience department-specific "brown-bag" seminars, which include presentations by students, faculty, and researchers visiting from other universities. Students are expected to attend the neuroscience "brown bags" and all of the BBS colloquia; all of these are announced on the BBS webpage and through e-mails to students.

The other component of the General Core comprises 6-9 credits of **Research Design, Statistics, and Professional Communication** courses that provide a foundation in the research design and statistical analyses that are important for research in SCN. Most students will be required by their research advisor or dissertation committee to take additional advanced coursework in research design, statistics, or other research tools relevant to their research.

1. Course list

A brief list of the coursework required for the SCN track is shown below; see also the UT Dallas <u>Graduate Catalog</u>. The University's course look-up page, <u>CourseBook</u>, provides more detail on some of the specific courses listed below.

Doctoral Proseminar	HCS 6302 Issues in Behavioral and Brain Sciences
Research Methods & Statistics	HCS 6342 Research Methods and Professional Development in
	Neuroscience (6312 prior to Fall 2021)
	HCS 6341 Genes Brain and Behavior (for entering students prior to Fall
	2021)
	HCS 6315 Research Grant Writing (for entering students Fall 2021 to present)
Major Field/Area Core	HCS 7121 Graduate Seminar: every semester after the first
5	HCS 6340 Cellular Neuroscience
	HCS 6346 Systems Neuroscience
	HCS 7343 Neuropharmacology
	HCS 6338 Functional Neuroanatomy (for entering students Fall 2024

Systems and Cellular Neuroscience Track

and after)

One course in the area of G	Cognitive Neuroscience (For students entering prior to Fall 2024)
	Approved courses are:
	HCS 6330 Cognitive Science
	HCS 6331 Cognitive Development
	HCS 6333 Memory
	HCS 6343 Neurobiology of Learning and Memory
	HCS 6395 Cognitive Psychology
	HCS 7309 Neural Correlates of Human Cognition
	HCS 7338 Brain Connectivity
Advanced Electives	Minimum of 3 additional HCS credit hours selected by student with approval of research advisor. An area core course can count as a core course or as an advanced elective, but not both. Depending on a student's background and research interests, additional advanced electives may be necessary. Courses outside of BBS may count as advanced electives with prior approval of Program Director.

2. Typical Courses by Year

For Students Entering Fall 2024 and After

Fall of Year 1 HCS 6340 Cellular Neuroscience HCS 6302 Proseminar HCS 6342 Research Methods and Professional Development in Neuroscience

Spring of Year 1 HCS 6338 Functional Neuroanatomy HCS 6346 Systems Neuroscience

<u>Fall of Year 2</u> HCS 7343 Neuropharmacology Elective (optional)

<u>Spring of Year 2</u> HCS 6315 Research Grant Writing Elective (optional, if necessary)

For Students Entering Prior to Fall 2024

Fall of Year 1 HCS 6346 Systems Neuroscience HCS 6340 Cellular Neuroscience HCS 6302 Proseminar

Spring of Year 1 HCS 7343 Neuropharmacology HCS 6341 Genes Brain and Behavior (for entering students prior to Fall 2021) Elective (optional)

<u>Fall of Year 2</u> HCS 6342 Research Methods and Professional Development in Neuroscience Elective (optional)

Spring of Year 2 HCS 6315 Research Grant Writing (for entering students Fall 2021 to present) Elective (optional, if necessary)

3. Waiver of Coursework Requirements

Students who enter the PhD program having successfully completed graduate coursework relevant to degree requirements may seek approval from the Program Director to waive specific courses. Students should submit such a request to their Program Director and attach the syllabus from the equivalent course taken previously. Generally, only courses in which a grade of A was earned will be considered, and the Program Director may require that another course be substituted for the waived course.

4. Transfer of Credit

Transfer of credit from another university is necessary only for PhD students who enter the program with extensive in-field, graduate coursework. Currently, students can request that up to 36 credits of graduate coursework completed elsewhere, with grades of B or better, be transferred toward PhD degree requirements. Those courses do not require a formal credit transfer request. To request a transfer of credit to substitute for a program requirement, the student must complete the Transfer of Credit Request and provide the Academic Support Coordinator with catalog course descriptions documenting the equivalence between courses taken elsewhere and UT Dallas courses. Form can be found on Blackboard SCN site. The Department, the UT Dallas Dean of Graduate Education, and the Registrar must approve all requests and approval should not be assumed. Transfer of credit from international universities can be problematic because of different systems of awarding credit and grades. Acceptance of transferred credit hours will not occur until after the student has completed 9 semester credit hours at UT Dallas with a grade point average of at least 3.0, and all petitions must be processed and approved no later than the semester prior to the one in which the student applies for graduation.

5. Master's Degree en Route

Because of overlapping requirements, PhD students in Cognition and Neuroscience may simultaneously seek a Master of Science (M.S.) degree in Applied Cognition and Neuroscience. Students interested in the dual degree program must complete a master's degree plan approved by Dr. Richard Golden, the Program Head in Applied Cognition and Neuroscience, showing how they will meet the coursework and research requirements for the M.S. degree. Students must submit a Graduate Change of Program Request in order to matriculate into the master's program no later than the semester prior to the semester in which the degree will be conferred. Students cannot be considered for a master's degree en route until they have been matriculated into that degree program and have a degree plan for that program on file. Please contact Melanie Davis (ACN) for specific information and procedures. For most students in the SCN program, you will complete as part of the SCN requirements 30 hours of credit which can be applied for the M.S. degree (out of a required total of 36 hours).

6. Enrollment Policies

Minimum enrollment for RAs and TAs is 9 semester hours for Fall and Spring. Summer enrollment requirements are determined each summer by the UT Dallas Provost and vary from year to year. In some summers, students will not enroll unless they are taking an organized course, graduating, or meeting a major milestone. In other summers, students will be required to enroll for up to 6 hours. Your ASC will inform you prior to registration of the number of summer hours in which you will enroll.

The number of hours in which you are enrolled in summer do not change any of the requirements and responsibilities of your assistantship. If you accept an assistantship in summer you must meet all of the obligations of the position regardless of the number of hours in which you are enrolled. Students who have been informed not to enroll during the summer continue their TA or RA appointments and remain eligible for University health insurance.

7. Enrollment Related to Graduation

All students must be enrolled in the semester(s) in which they defend and graduate. Students participating in Priority Graduation are exempt from enrolling in their graduating semester provided they meet Priority Graduation requirements. Students who plan to graduate with priority deadlines are not eligible for a TA or RA appointment. If a student fails to meet priority graduation deadlines, they are required to enroll. Tuition support and a TA or RA appointment are NOT guaranteed after failing to meet priority graduation deadlines. Self-funded students may enroll for 1-credit in their graduating semester. The 1-credit option can only be used once. Other than this exception, self-funded students must enroll for a minimum of 3 credits. Funded students enroll for 9 hours in their graduating semester or the number of hours specified by the Provost for summer graduation.

Students must complete a graduation application for the semester in which they intend to graduate. Online graduation applications are available only through your Department's Academic Support Coordinator. The graduation application triggers the appointment of the outside chair for your dissertation defense. Your defense cannot be scheduled until an outside chair has been appointed.

Students planning to defend their dissertation in the summer should complete their graduation application by the start of the long summer session. Finding an outside chair for a summer defense can be difficult and students who apply late risk having their defense delayed.

Section 3.B Selection of Research Advisor(s) and Dissertation Laboratory

The SCN track in the Cognition and Neuroscience PhD Program provides two options for joining a dissertation research lab and selecting a Research Advisor. There is a direct admit and a rotation option. In the rotation option, a student chooses three laboratories to rotate in during the fall of their first semester in the SCN program. The rotation timing and process is overseen by the SCN Program Director.

1. Direct Admit Research Option

In the direct admit option, a student selects a research laboratory and research advisor upon acceptance of invitation to join the program. The choice of lab is determined by a mutually agreed decision between the student and the research advisor with approval from the graduate committee. When the student matriculates to the School, the student will immediately join the laboratory of the Research Advisor.

2. Research Rotation Option

In the rotation option, students choose three laboratories to rotate in during the fall of their first semester in the SCN program. Students are encouraged to complete the full rotation process prior to choosing a lab. The rotation timing and process is overseen by the SCN Program Director.

a. Rotation Lab Selection Process

After acceptance in the SCN track, students are encouraged to begin reaching out to potential research advisors to ask about the potential for a rotation in the lab. After a research advisor agrees to be a rotation, the student will need to work with the research advisor and the Academic Support Coordinator to determine the timing of the rotation (rotation slot 1, 2, or 3). The student will fill out and submit the Rotation Lab Form and submit to the Academic Support Coordinator via email prior to the start of the rotation.

b. Rotation Timing and Process

Research rotations begin early in the fall semester and last typically for five weeks (Rotation 1 = 1-5 weeks; Rotation 2 = 5-10 weeks; Rotation 3 = 10-15 weeks). Students are encouraged to contact rotation advisors prior to the start of the session to complete any necessary biosafety, animal or other training. Students should anticipate spending at least 10 hours per week minimum in the rotation lab although additional time may be necessary and/or beneficial to the student. Note that these 10 hours are in addition to paid time commitment as a TA (if relevant).

c. Dissertation Lab Selection

At the end of the 3rd rotation, students will meet with all of their rotation advisors to determine the potential for the laboratory as a permanent dissertation laboratory. This decision is a mutually agree upon decision from the research advisor and the student. In some circumstances, a student may want to join a lab but the rotation advisor cannot take the student for funding or other reasons. Following selection of the mutually agreed (research advisor and student) dissertation laboratory the student should inform the Academic Support Coordinator and the Program Director of the choice.

If a student is not able to find a suitable research lab after the rotations are complete, they may have the option to complete a single 4^{th} rotation in spring of the 1^{st} year. If that rotation is not successful or possible the student will be expelled from the program.

3. Location of PhD Research

Typically, students will conduct the majority of their research with a faculty member at The University of Texas of Dallas in the Department of Neuroscience or affiliated department.

A student whose research advisor (i.e. PI) leaves the university for another institution before the student graduates may apply to remain in the SCN program. Permission to remain in the program will be at the discretion of the graduate committee. If permission is granted, the student will need to recruit a secondary mentor in Neuroscience to serve as the official dissertation chair. There are two options for the student to remain in the SCN program:

- **a. Option 1:** If the student wishes to remain at the University and do research in another SCN laboratory, she/he must identify that new laboratory and that research advisor must accept the student.
- **b.** Option 2: If the student wishes to remain a University of Texas at Dallas student but do research with the transferring research advisor:
 - i. The PI who is leaving will be considered as a voting external member of the committee and will serve as the co-chair. A UTD faculty member would be named as chair. The remainder of the student's original committee will remain the same (pending agreement by those committee members). Annual meetings and updates are to be completed at the University of Texas at Dallas or through videoconferencing technology.

- ii. TA ships will not be guaranteed if student is outside the DFW area and cannot actively be on UTD's campus. In such a case, the transferring research advisor must agree to pay for student RA stipend.
- iii. In the context where the student has not completed all coursework, the student can apply to the graduate committee (prior to taking any courses) to cover remaining requirements at another university using UTD transfer of credit policies. All individual courses must be approved by the graduate committee.

Section 3.C Qualifying Papers and Projects Overview

Students in all BBS PhD programs must complete a set of qualifying papers and projects before they can advance to PhD candidacy by successfully defending their dissertation proposal. These qualifying papers and projects take the place of a PhD qualifying examination. Through their qualifying papers and projects students demonstrate mastery of the literature in their field, competence in research processes and methods, and written and oral communication skills commensurate with professional standards in the discipline.

Because professional writing skills are considered in evaluating all qualifying papers, students who cannot effectively communicate their findings may fail to have their papers accepted, regardless of the strength of their finding. It is essential that students with poor written communication skills seek outside tutoring or instruction. Research advisors may offer suggestions to enhance the content and organization of papers, but they cannot be expected to devote time to improving poorly constructed prose.

There is a single standard Qualifying Process for the SCN track. Dates below are applicable for all students starting in the summer semester or the fall semester. For students starting in the spring semester a distinct set of dates are utilized (see Section 3.D.4 below).

Section 3.D Qualifying Plan for SCN

All PhD students in the Systems and Cellular Neuroscience track are required to present their research in the area seminar course* typically every year, and students must publish at least one peer-reviewed research paper as the first author before scheduling the defense of the dissertation. See Overview of Qualifying Plan - Systems and Cellular Neuroscience on the SCN Blackboard/eLearning site for a summary of key events and deadlines for students in this track.

*Students can also present in Center seminars and work-in-progress events.

In the first three years, students complete a "First Year Research Project" and a "Grant Proposal." The First Year Research Project is evaluated by the student's First Year Project Committee, which consists of the student's research advisor, one neuroscience faculty, and one faculty member at UTDallas who can also be in the neuroscience faculty (see section 3.D.1.a.i below for more details). The Grant Proposal serves as the dissertation proposal, and it is evaluated by the Dissertation Committee, which usually consists of the members of the First Year Project Committee and at least one additional member.

Students are encouraged to work closely with research advisors to submit their grant proposals to the relevant agency for consideration of funding long before the due dates established by the program. However, submission to the NIH NRSA program or other pre-doctoral grant program is not a requirement and has no impact on whether the student will proceed to PhD candidacy.

1. SCN First Year Research Project

The first year project serves as a qualifying exam and consists of a (1) Project proposal (2) Project

manuscript (i.e., write-up) and (3) Presentation of a single experiment, carried out by the student, which usually has its roots in work already being conducted in the research advisor's lab. It is a study sufficiently narrow in scope to be completed within 6-7 months, but sufficiently comprehensive to demonstrate research skill in the student's field of study. Students should effectively communicate an understanding of the background literature and the rationale for the experiment, clearly explain details of methods, results, and analysis, and draw reasonable conclusions. The final project manuscript should be formatted like a primary research article and the student will present and defend the paper in a 25-minute public talk followed by a separate private defense with their committee. A publishable manuscript is NOT expected for the First Year Research Project.

a. First Year Project Proposal (deadline March 1 1st year)

Before initiating the first year research project, a 2-3 (2-5 pages for students entering prior to Fall 2021) page research project proposal describing the rationale and methodology of the research project and including key references is developed in consultation with the student's research advisor.

i. The student and research advisor will work together to identify at least two other faculty committee members who have appropriate expertise for the proposed research project. At least one of those faculty should be a faculty member in the Department of Neuroscience or affiliated faculty (i.e., non-Department of Neuroscience SCN research mentors) in the SCN program. The other faculty member should be a UTDallas faculty member. The student will provide a copy of the proposal to the prospective committee members and invite them to serve on the committee. After getting feedback on the proposal, the student should prepare a final project proposal, students must submit the final proposal and the First Year Project Committee Membership – Systems Neuroscience Program form to the Academic Support Coordinator via the SCN Blackboard/eLearning Site by March 1 (February 1 deadline for students entering prior to Fall 2021) of the first year of study. A tutorial on the expectations for this project and a template for completing the proposal is available on the SCN Blackboard/eLearning Site.

b. First Year Project Research

Over the next 6-7 months, the student will complete the First Year Research Project. It is important that the student complete as much of the proposed experiment as possible, but it is not necessary to fully complete the project in order to write the manuscript (see Section 3.D.1.c below).

- c. First Year Project Manuscript (deadlines Sept 1, Nov 1 and Nov 15 2nd year)
 - The completed study should be written up in journal format (i.e., manuscript) for evaluative review. Journal format should include a title, abstract, introduction, methods, results, discussion, and references. The full manuscript must be written entirely by the student and should not contain unpublished data produced by others. If the First Year Project is included in a full manuscript for publication with other contributors the student is welcomed to submit that version <u>in addition</u> to the version containing only the student's work but only the student's version will be applicable to the examination. The student will submit the project to the committee and Academic Support Coordinator via the SCN Blackboard/eLearning Site and their committee by September 1 of the second year of study. There is no page limitation on the manuscript. Please see the SCN Blackboard/eLearning Site for example templates and previous students' manuscripts for example. All students are required to discuss early in the Spring of their first year what the expectations are from the research advisor for

receiving early drafts of the FYP before the Sept 1 deadline. Some research advisors may ask for multiple back-and-forth editing prior to the Sept 1 submission.

- ii. Between Sept 1 and Oct 1, the committee will determine if revisions are needed before a defense meeting is scheduled. First Year Projects are evaluated as "acceptable" or "acceptable with revisions". "Acceptable" means that the student has clearly met the criteria established for successful completion of the First Year Project. However, in most cases, minor editorial changes are necessary before final approval is given. In cases of "acceptable with revisions", the Committee will specify recommended changes in the paper, and require the student to submit a revision incorporating these changes by Nov 1. The revision should be submitted directly to the committee members. Along with the revised manuscript, the student must submit a detailed cover letter indicating where specified revisions have been made and the pages where the revisions may be found and/or a full explanation of why the student decided not to make changes recommended by the Committee. All revisions of papers rated "acceptable" or "acceptable with revision" will be approved by November 15 of the second year of study. A majority rating of "not acceptable" on a revised First Year Project manuscript will be reviewed by an independent faculty member appointed by the Associate Dean for Graduate Studies in consultation with the Program Director. Independent evaluation supporting the rating of unacceptable subjects the student to dismissal from the program. It should be noted that a competently conducted First Year Project will not be rated "not acceptable" due to disappointing or incomplete data.
- iii. The student will submit the signed First Year Project Approval Form Systems Neuroscience Program along with an electronic copy of the final First Year Project Manuscript to the Academic Support Coordinator via the SCN Blackboard/eLearning Site no later than November 15 of the second year and the manuscript must be fully approved <u>prior</u> to the FYP oral presentation. Note: Students are encouraged to schedule the FYP oral presentation early in the fall semester due to general scheduling challenges. This scheduling can occur prior to manuscript approval.

d. First Year Project Oral Presentation (deadline December 15 2nd year)

The oral defense of the First Year Project must be held by December 15 (end of the semester). The student will publicly present the research project and answer questions about the research and the research area. With committee approval of written project manuscript (see above **Section 3.D.1.c**), the student can make their public presentation and hold the defense of their First Year Project during the graduate seminar (brown bag) meeting (or related departmental/center seminar or work in progress series). The coordinator of the graduate seminar series should be contacted in the summer to arrange for scheduling the public presentation. This should be an in-person meeting held in a room big enough for the department to attend (minimum 30 seats). Virtual options for the audience are welcomed. Students are required to present their first year project in person.

- i. The oral presentation includes a 25-minute presentation with questions from the public followed by a separate private defense in front of their First Year Project Committee.
- ii. Students should conclude their public oral presentation with a brief description of the specific aims of their dissertation research grant proposal (see below **Section 3.D.2**).
- iii. The student will submit the First Year Project Public Presentation and Defense Systems Neuroscience to the Academic Support Coordinator via the SCN Blackboard/eLearning Site by December 15 of the second year. Students who do not pass their oral defense may be allowed a second chance to defend before February 1 of the second year. Determination of "accept" or "unacceptable" of First Year Presentation will be made by First Year Project Committee. A majority vote of "Fail" following the second oral defense of the qualifying project will result in dismissal of the student from

the program.

2. SCN Dissertation Grant Proposal

The Grant Proposal will serve as the dissertation proposal. Please see "DISSERTATION" section below for additional details on the dissertation proposal including the public defense. This process includes a (1) pre-proposal (2) written grant proposal and (3) oral defense of the proposal.

a. Pre-Proposal (deadline February 1 2nd year)

Students should begin by writing a Pre-Proposal (in the format of a typical <u>NIH-style</u> Specific Aims Page, 1 page maximum; 11 point Arial Font; minimum 0.5inch margins; single-spaced). All students are required to discuss what the expectations are from the research advisor for receiving early drafts of the pre-proposal prior to the February 1 deadline. They will also need to have a committee that includes at least four faculty. This typically includes their research advisor, two members from their First Year Project Committee and a fourth member.

- Prior to February 1 of the second year of study, the Pre-Proposal should be submitted, via email and on Blackboard, to the Dissertation Committee. Students (entering prior to Fall 2021) should enroll in HCS 6315: "Scientific and Grant Writing, to provide training in crafting a Specific Aims Page. Students entering after Fall 2021 will receive information on specific aims construction in the HCS 6312/42 Research Methods in BBS Part I and HCS 6315 Research Grant Writing courses taken during the second year.
- ii. Once all committee members have agreed to serve on the committee, the pre-proposal and signed Committee Appointment Form, should be submitted to the Academic Support Coordinator via the SCN Blackboard/eLearning Site. The committee does not need to "approve" the pre-proposal. The deadline for this submission is February 1 of the second year of study.
- **b.** Grant Proposal (deadlines Sept 1, Dec 1, and Dec 15 of the 3rd year)

The grant proposal is designed to provide students with experience in analyzing and synthesizing the research literature and in developing the rationale, literature review, and design of a potentially feasible and fundable study. The Sept 1 version should be considered a complete and "final" version from the student.

- SCN students should write grant proposals in NIH NRSA style (6 pages maximum, not including the Pre-proposal Specific Aims page and references; 11 point Arial Font; minimum 0.5inch margins; single-spaced). The project can be related to a currently funded proposal in the laboratory but cannot be identical. The student should complete all of the writing themselves. They may make use of the writing center for help with grammar, etc. Research mentors (and other faculty) may provide feedback on the proposal. All students are required to discuss early in the Spring of their second year what the expectations are from the research advisor for receiving early drafts before the Sept 1 deadline. Some research advisors may ask for multiple copies prior to the Sept 1 submission.
- ii. The completed grant proposal must be submitted to the entire Dissertation Committee by email and to the Academic Support Coordinator via the SCN Blackboard/eLearning Site by September 1 of the third year.
- iii. After receipt of the proposal, dissertation committee members will have 1 month to review and score the proposal with students receiving feedback by October 1 of the third year. Feedback should be similar to what a PI might receive for a NIH research

grant study section review including open questions and concerns. Committee should generally refrain from suggesting specific changes or new experiments. Committee does not need to "copy edit" proposal but should make general comments about grammar, spelling etc. Dissertation Proposals are evaluated as "acceptable", or "acceptable with revisions". "Acceptable" means that the student has clearly met the criteria established for successful completion of the Grant Proposal and can immediately proceed to scheduling of the Grant Proposal Oral Defense (see below **Section 3.D.2.c**). Student should circulate the Grant Proposal Manuscript approval form for signatures and submit to Blackboard by December 15. However, in most cases, minor or significant changes are necessary before final approval is given. In cases of "acceptable with revisions", the Committee will specify recommended changes in the paper, and require the student to submit a revision incorporating these changes by Dec 1.

- iv. If the Grant Proposal was "acceptable with revisions" the revised proposal is due to the full committee by December 1 of the third year, and the revision will include an Introduction (1 page maximum) describing the changes made in response to prior reviews. If the committee votes "acceptable", the student proceeds to the oral defense of the proposal. If "acceptable", the student should circulate the manuscript approval form for signatures. The final grant proposal with introduction page and approval form should be submitted to the Academic Support Coordinator via the SCN Blackboard/eLearning Site by December 15 of the third year.
- v. If the committee votes "not acceptable" on the revised Grant Proposal, the student must edit and submit the proposal a final time within two months of the "not acceptable" notification. Committee chair shall notify the Program Director and Academic Support Coordinator of any rating of "not acceptable." Th Revised Grant Proposal shall be submitted directly to the Committee and Program director via email and shall be evaluated as "acceptable" or "not acceptable" within two weeks of document receipt. "Not acceptable" after resubmission will typically lead to expulsion from the program. If "acceptable", the student should circulate the manuscript approval form for signatures. The final grant proposal with introduction page and approval form should be submitted to the Academic Support Coordinator via the SCN Blackboard/eLearning Site.

c. Grant Proposal Oral Presentation (deadline May 15 of the 3rd year)

- i. The Presentation of the Grant Proposal (dissertation proposal defense) will be scheduled during the spring semester of the 3rd year and must be completed by May 15 (end of the semester). The Presentation may be scheduled prior to full approval of the written Grant Proposal but the actual defense must occur only after manuscript acceptance. This should be an in-person meeting held in a room big enough for the entire department to attend (>30 people). All students are required to present their oral presentation in person. Virtual options for audience members are required for all proposal defenses.
- ii. The presentation/defense includes a public presentation (maximum 60 minutes including questions) followed by a private defense in front of the Dissertation Committee.
- iii. The defense will include questions related to background and relevant literature as well as the experimental design. There may be questions regarding why a particular experimental approach was chosen and what might happen if expected results are not obtained.
 - a. If the committee votes to "acceptable" the student AND less than two committee

members vote "not acceptable", the student proceeds to PhD candidacy. Student should circulate approval form. Signed form must be submitted by May 15 of the third year to Blackboard.

- b. If the committee votes on a "conditional acceptance," the student will be practically considered to proceed to candidacy but must complete all conditional tasks (e.g., taking a course, TAing a course, etc) in the timeline set forth by the committee and approved by the SCN Program Director. Failure to complete tasks may lead to expulsion from the program. Student should circulate approval form which will clearly describe conditions of the acceptance. Signed form must be submitted by May 15 of the third year to Blackboard.
- c. If two or more committee members vote "not acceptable" following the oral defense of the dissertation proposal, the student may schedule a second oral defense no later than August 1 of the 3rd year. An independent faculty member appointed by the Associate Dean of Graduate Studies will join the committee evaluating the re-examination. If the majority of the committee votes "acceptable", the student proceeds to PhD candidacy. If the student does not pass the re-examination, they likely will be dismissed from the program.

3. Qualifying Process Failure and Extension Requests

Failure to pass (rating of "not acceptable") any of the qualifying process or meet any deadlines is grounds for dismissal from the program as described above. If any deadlines are missed, the student must file immediately an extension request approved by their research advisor and the program director. The extension request must include the reason for the missed deadline(s) as well as a description of a timeline to meet the deadline(s).

4. Qualifying Schedule for Spring Matriculation

The Qualifying Process is identical for students who start in spring (instead of fall or summer) but the timeline is adjusted for these students. Here are the due dates for Spring matriculating students.

June 1 – First Year Research Project Proposal and Form June – December – First Year Project Research in Lab January 1 of 2nd year – First Year Project Manuscript first submission February 1 of 2nd year – Feedback received from Committee March 1 of 2nd year – Revised FYP manuscript due to Committee March 15 of 2nd year – Committee approves FYP Manuscript March 15 of 2nd year – First Year Project Manuscript and Form Submitted April 15 of 2nd year – First Year Project Presentation and Form Submitted June 1 of 2nd year – Grant Proposal Pre-proposal and Dissertation Committee Form January 1 of 3rd year – Grant Proposal full proposal February 1 of 3rd year – Final revised Grant Proposal with Introduction Submitted April 15 of 2nd year – Committee approves Proposal and Form Submitted September 15 of 3rd year – Grant Proposal Oral Defense and Form

Section 3.E Systems Neuroscience Published Research Requirement

Before the Final Oral Exam (Dissertation defense) can be scheduled (Request for Final Oral Exam), students in Systems Neuroscience must provide evidence of acceptance of a research paper in a peer-reviewed journal. Published papers or notification of acceptance from the journal may be shared, by e-

mail, with the dissertation committee. The student should be the first author of at least one <u>accepted</u> journal article. This requirement is designed to give students the opportunity to write, submit, revise, resubmit, and publish their research with the guidance of their research advisor and dissertation committee and it will prepare students for future employment in the field of neuroscience.

Section 3.F The Dissertation

The <u>Office of Graduate Education</u> summarizes requirements and deadlines for completing the dissertation. The information below provides more detailed information on the dissertation for PhD students in BBS.

1. Dissertation Committee

The **dissertation committee** oversees and assists the student in developing a dissertation proposal and conducting the dissertation research; the committee also reviews and evaluates the written dissertation the Final Oral Exam (dissertation defense).

a. Forming the Committee:

- i. To form a dissertation committee, the student works with the research advisor to identify at least four potential committee members from among the neuroscience (mainly BBS) faculty. One of these four, the Chair, must be a tenured or tenure-track faculty member in BBS. Occasionally a student may wish to appoint a co-chair from another university (e.g., if the student plans to conduct a substantial amount of the dissertation research in that off-campus lab) or a non-tenure track faculty member who has relevant expertise. However, the student should recognize that scheduling committee meetings and obtaining signatures can be difficult when committees include off-campus members. <u>UTDPP 1052 Procedures for Completing a Graduate Degree</u> provides details on appointing non-UTD and non-tenure system faculty to dissertation committees.
- ii. Students may form a dissertation committee whenever they choose, but they are not permitted to submit the Grant Proposal (Dissertation proposal) to the committee until the proposed members have been approved by the BBS Graduate Studies Committee and by the UT Dallas Dean of Graduate Education. To do this, the student must submit a signed Committee Appointment Form and a 1 page Pre-Proposal with reference citations to their Academic Support Coordinator for review by the BBS Graduate Studies Committee. The Graduate Studies Committee may choose to add an additional committee member if they feel additional expertise is necessary to effectively guide and evaluate the student's research. Final approval of the dissertation committee by the UT Dallas Dean of Graduate Education is required before the student submits the Grant Proposal (aka Dissertation Proposal) to the dissertation committee for review.
- iii. Once formed, the dissertation committee must meet at least twice per year to review the student's progress toward completion of the proposal and final dissertation. Students are encouraged to meet more frequently with the committee.

2. Dissertation Proposal

The **dissertation proposal** ("Grant Proposal" in the SCN Qualifying Exam process; see **Section 3.D.2** above) is a comprehensive prospectus for the dissertation. It includes a rationale, statement of the problem, specific hypotheses, discussion of relevant literature, methodology and procedures, a plan for statistical analysis, and when appropriate, pilot results. It is generally assumed that the student will have completed relevant research with the supervising professor and that the dissertation proposal is an outgrowth of that research. Although preparation of the dissertation proposal is overseen by the

dissertation Chair, it is important to keep other members of the committee informed of progress and, where appropriate, to invite their critique of the rationale, design, and proposed methods of data analysis. Once formed, the dissertation committee must meet at least once/year to review the student's progress toward completion of the proposal and final dissertation.

- **a.** If previously collected data, either archival or collected by the student, is to be used in the dissertation, the source of the data must be divulged to members of the dissertation committee in the proposal and at the proposal defense. This does not include pilot data used to justify the project, but it does include any data collected before the proposal defense that the student intends to include in the dissertation. Students should be aware that the dissertation committee may question the validity of archival and prior collected data and have the authority to reject these data. For that reason, students should inform committee members early of the source of their data and not continue to collect data that committee members view as potentially flawed.
- **b.** When the proposal is completed, the student presents the proposal to all members of the dissertation committee for review as described above in **Section 3.D.2**. When the committee members are satisfied with the proposal including, where applicable, the use of previously collected data, and believe the student is ready to be formally evaluated by the School's faculty, they will sign the Dissertation Proposal Meeting form requesting a public defense of the dissertation proposal. The student submits this form and the approved dissertation proposal to the Academic Support Coordinator via the SCN Blackboard/eLearning site as describe above in **Section 3.D.2.b**.
 - c. Scheduling the Dissertation Proposal Defense
 - i. The Academic Support Coordinator and Neuroscience administrators schedules the dissertation proposal defense at the request of student with guidance from the Dissertation Committee chair. All faculty and students are invited to attend the dissertation proposal defense, and the faculty must be notified of it at least two weeks in advance. The student should also request that the Academic Support Coordinator distribute to the faculty a copy of the final Dissertation Proposal at least two weeks in advance of the defense for faculty members who wish to review it.
 - ii. The dissertation proposal defense may be scheduled only on days when the Academic Calendar shows that classes are in session not on University holidays, Reading Days, Final Exam Days, or between semesters.
 - iii. In no case may the public defense of the dissertation proposal take place until the student has passed all qualifying paper and project requirements including brown bag presentations, and the Graduate Dean has approved the dissertation committee. For PhD Students working in Systems and Cellular Neuroscience the dissertation proposal defense should be held no later than May 15 of the 3rd year.
- d. Format of the Dissertation Proposal Defense
 - i. To begin the dissertation proposal defense the student presents the background and goals of the proposed research and the methods to be employed. The student then answers questions from members of the faculty including the dissertation committee and others in attendance.
 - Following the conclusion of the public questions, there is a private defense with the Dissertation Committee (all members of the neuroscience faculty may also attend). Only dissertation committee members in attendance for the private defense vote on whether the student demonstrated mastery of the theoretical issues and empirical findings in his or her field of specialization and was able to present and defend the proposed dissertation research in a manner commensurate with the PhD degree.

- iii. Faculty in attendance during the public and private components may offer recommendations to strengthen the project; although the student and dissertation committee are not bound to accept them it is assumed that these recommendations will be given careful consideration. Passing the dissertation proposal defense is by vote of the majority of the committee in attendance for the private defense.
- iv. The conducting chair records the vote, and voters record their names and signatures, on the Public Presentation of Dissertation Proposal Form. The student submits this signed form to the Academic Support Coordinator via the Blackboard/eLearning site; the form is then sent to the UT Dallas Dean of Graduate Education along with a letter from the School stating whether the student passed the dissertation proposal defense.

Students who fail the first dissertation proposal defense are permitted to use the same procedures to schedule a second dissertation proposal defense that must be held before the end of the following semester. Students who fail the dissertation proposal defense a second time or do not hold the second defense before to the end of the following semester will be dismissed from the PhD program.

3. Dissertation Defense

a. Scheduling the Final Oral Exam (Dissertation Defense)

After passing the dissertation proposal defense the student carries out the dissertation under the supervision of dissertation committee Chair with assistance from other committee members.

- i. The student writes the dissertation manuscript according to guidelines available at the <u>Office of Graduate Education website</u>, and submits the manuscript to the dissertation committee for review. When the dissertation manuscript is approved by a majority of the dissertation committee, the student emails the Academic Support Coordinator and/or Neuroscience administrators to schedule a room for the Final Oral Exam. The student then completes the <u>Request for Final Oral Examination</u> form and obtains signatures of all of the committee members. The student will submit this form, the dissertation, and an unsigned formatted signature page to the <u>Thesis and Dissertation Submission website</u>. A Graduate Reader will review the dissertation for formatting and email the student with necessary corrections. Students should review the <u>Checklist for Final Submission of Doctoral Dissertation</u> on the Office of Graduates Education site for information and deadlines concerning review, approval and submission of the final dissertation document.
- ii. As required by the Office of Graduate Education requirements, the Request for Final Oral Examination should be submitted at least 2 weeks prior to the scheduled defense.
- b. Format of the Final Oral Examination (Dissertation Defense)

The final oral examination is administered by an additional faculty member appointed by the Graduate Dean and is open to the public. Students should review the <u>Thesis and Dissertation Guide</u> available on the <u>Office of Graduate Education</u> website, as well as the <u>Policy on Procedures for Completing a Graduate</u> <u>Degree (UTDPP1052)</u>. When the student passes the defense, they obtain the signatures of the dissertation committee members on the original signature page. The student will then upload the signed signature page to the <u>Thesis and Dissertation Submission website</u> and follow the submission directions on the <u>Checklist for Final Submission of Doctoral Dissertation</u> on the Office of Graduates Education site. All students are expected to defend their PhD dissertation in person in a public setting as of August 2023.

Section 3.G Support for Doctoral Study (Policy subject to change)

1. Graduate Assistantships:

Financial support for full-time doctoral study is available in the form of teaching and research

assistantships. Teaching assistants are appointed by the Graduate Studies Committee while research assistants are appointed by individual research advisors (aka faculty PIs). The number of teaching assistantships available each year is determined by the annual budget while the number of research assistantships depends on the funding of faculty extramural grants.

Each Teaching and Research Assistantship carries an obligation to provide 20 hours/week of work outside of work done for course credit or independent study and research. Although an assistantship is considered a half-time position, full-time students are expected to give full-time effort to graduate study and research including fulfilling the obligations of their assistantship.

All students funded by teaching and research assistantships are awarded tuition scholarships covering the cost of tuition and fees (resident and non-resident). These scholarships cover a maximum of 9 credits in the fall and spring semesters and a maximum of 6 hours for students who need to enroll in the summer. Students wishing to enroll in more than the standard number of credits in a semester may have to pay tuition and fees for the additional credits.

An appointment as a TA is a commitment for the semester. Even if there is an opportunity for employment as a RA, grant fellowship, or position outside the University, the student is obligated to finish the semester in which they accepted employment as a TA. Should a student need to leave their assistantship in the middle of the semester, they must immediately notify their Program Head, the Associate Dean of Graduate Studies (**Dr. Robert Stillman**), and Program Manager (**Michelle Blazewicz**). Leaving mid-semester for reasons other than health emergencies may result in the student being asked to repay their tuition scholarship to the school.

2. Teaching Assistants:

Teaching Assistants (TAs) are appointed expressly to contribute to the instructional activities of the BBS School. TAs participate in the TA "Pool" for 10 hours/week; they spend the remaining 10 hours/per week carrying out various assignments under the supervision of the research advisor. Students in the TA Pool are assigned to assist instructors in specific BBS courses, typically large undergraduate classes, classes with associated laboratories or discussion sections, or classes requiring extensive office hours and student tutoring. TA assignments vary depending upon program needs and the skills and experience of the student. Course instructors determine the specific responsibilities of their TAs, and students may be assigned limited direct teaching responsibilities under the supervision of the course instructor.

- **a.** Students who wish to have more extensive teaching experience including responsibility for full courses should contact the Associate Dean for Undergraduate Studies or the undergraduate program director for the department in which they are interested in teaching. Because students assigned to teach full courses are expected to devote 20 hours/week to their teaching-related activities they are not also assigned 10 hours/week to their research advisor.
- **b. TA Assignment:** Students are notified by e-mail of their TA Pool assignment before the start of each semester. Attempts are made to assign students in areas related to their interests but depending on School needs there may be occasions when students are assigned as TAs to courses outside their discipline. Students are provided sufficient guidance to perform well in these roles.
 - When students receive their TA Pool assignment, they should contact the faculty member to whom they are assigned. Any time conflict regarding your TA responsibilities and the courses in which you are enrolled need to be resolved quickly. In such an event, contact your Ph.D. Program Director or if your assignment is outside your department, contact Dr. Stillman or Michelle Blazewicz, the BBS Program Manager.
- c. Extra Duty TA Pool: Each semester, one or more students are assigned to the "extra duty

TA pool." Students in the extra duty pool are not assigned to specific courses but are on call for 10 hours/week to proctor exams and handle clerical and other work related to courses. The Program Manager supervises the extra duty TA pool and will directly contact students as needed.

- **d.** Teaching assistantships are awarded on a 9-month basis. Opportunities for teaching assistantships in the summer depend upon need in particular coursework areas, student progress, and available funds.
 - i. Students who request summer funding will be notified in April. If you do not plan to be here during all or part of the summer or prefer to relinquish your duties in order to concentrate on completing your projects, inform your Ph.D. Program Head and Dr. Stillman. Students planning to spend time off campus that would interfere with summer term TA or RA duties should not request summer support, as the performance of TAs and RAs is evaluated and a failure to meet assistantship obligations could affect future assistantship support. Talk to your research advisor and contact your Program Director if in doubt about your summer schedule. Students not assigned as TAs or RAs during a summer term remain eligible for re-appointment in subsequent semesters.

3. Research Assistants:

Research Assistants (RAs) are selected by and assigned to specific faculty-initiated extramural grants, and RAs are not obligated to serve in the TA Pool. The specific assignments and responsibilities of RAs are decided by the grant's Principal Investigator (research advisor) but usually include participation in research as well as the clerical duties that support research.

4. TA and RA Salaries and Appointments:

The salary of TAs is set by the School and Departments. RA salaries are paid from fellowships or Principal Investigators and are not set below those of the TA salary.

Students supported on RA positions lost through expiration of a grant are typically offered TA positions if they are in good standing and making acceptable progress toward the degree. The salary of students transferred to TA positions will be at the current TA rate.

TAs and RAs are appointed from August 16 to December 31, from January 1 to May 15, and from May 16 to August 15. Appointments run the duration of the semester. Students who are appointed as a TA are committing to supporting the course to which they are assigned for the length of the semester. Any RA or TA who leaves the program while a semester is in session not only forfeits the monthly stipend from that date forward, but may be retroactively charged for that semester's tuition and fees assessments.

5. Renewal of Assistantships:

Annual renewal of assistantship support depends upon student progress and timeliness in meeting program requirements, as well as the availability of assistantship funds. Students should not anticipate TA funding for the duration of their time in the doctoral program and whenever possible should seek opportunities to obtain RA positions. More than five years of TA support requires a special request to the Graduate Studies Committee and normally is approved only when it is clear that the student has made good progress and is nearing completion of the degree.

Students or faculty may request transfer of assistantships from an RA to a TA or TA to RA at the end of a semester. The Program Manager should be notified of any RA/TA status changes no later than 4 weeks prior to the start of a semester (first day of classes). Notifications made after this date are subject to review and may not be approved. Research Assistants are selected by a grant's Principal Investigator (PI).

A student may choose to decline a PI's request for RA appointment and opt for a TA position in consultation with the Program Director.

6. Assistantship Responsibilities During Semester Breaks:

TA duties normally extend from 4 working days before classes begin through the last day of final exams, but TAs for courses with final exams that occur late in the exam period are required to work until grading is completed or the due date for submitting final grades to the Registrar. These dates are published in the University's official Academic Calendar each semester. Variations to this schedule must be approved by the student's research advisor, the instructor of the course for which the student is a TA, and the Department Head.

RAs may be expected to follow the University's Human Resources Staff Calendar rather than Academic Calendar, which results in shorter intersession breaks. To avoid misunderstandings, RAs should check with their supervisors early each term to clarify expectations about working during intersessions.

TAs planning travel (other than approved travel to professional meetings) that might interfere with their duties must receive approval in advance from their Program Director. RAs planning such travel must receive approval in advance from the Principal Investigator of the grant. Students should not make travel arrangements or purchase tickets before the absence has been approved.

As noted above, students anticipating extended absences during the summer sessions should not seek TA support, even if the travel is in conjunction with data collection for dissertation research. All TAs are expected to be available for the duration of the summer sessions whether they are assigned to a course or to the extra-duty TA pool (see Section 3.G.2.c).

The University does not permit students supported as TAs or RAs be employed elsewhere. Doctoral study can cause both financial and personal strains, but it is in everyone's best interest for students who feel unable to devote full time to their studies and assistantship obligations to resign their assistantships and shift to part-time status, or to seek a leave-of-absence. In general, students in good standing who temporarily resign their assistantship may be reappointed when they return to full-time status.

TAs and RAs must sign the <u>TA/RA Responsibilities</u> form before they begin their assistantship. Additional information on graduate assistantships is available at the <u>Office of Graduate Education</u> site, including University policies related to graduate assistantships, <u>UTDPP1075</u>.

7. Other Grants and Scholarships:

Students are strongly encouraged to apply for pre-doctoral grants and fellowships as well as private scholarships for which they may be eligible. There are also scholarships funded by School endowments for which PhD students are eligible. There will be a call for applications each spring and students are encouraged to apply.

The <u>Office of Graduate Education</u> provides information on additional sources of funding support for dissertation research. Graduate students with significant external funding often receive Eugene McDermott Scholars Fellowships that supplement their pay and research supplies.