Behavior and Brain Sciences April 2019

Objectives and Purposes

The overarching goal of the doctoral program in Behavior and Brain Sciences (BBS) is to prepare students for successful careers as scholars in academic or other professional settings. Students start work on the general Master of Science (MS) requirements and upon completion, pursue more targeted study, as specified for the Doctor of Philosophy (PhD) requirements. BBS students develop advanced expertise in any of an extensive range of specialty topic areas supported by our diverse faculty. Students are encouraged to devise programs of study best suited to their particular needs and aspirations, and work in conjunction with the guidance and approval of their major professors and advisory committees.

General Definitions and Descriptions

Major Professor

As advanced graduate education proceeds primarily via an apprenticeship model, the choice of mentors is an important decision in students' graduate careers. Students enter the BBS program with a plan to work with one (or sometimes two) Major Professor(s). The Graduate School requires that the Major Professor is a member of the UGA Graduate Faculty to supervise master's theses and doctoral dissertations. Students' academic and research interests can undergo significant changes, especially during the first two years of study. If students desire additional or different mentorship, it should be addressed with the current Major Professor(s) and the Psychology Graduate Coordinator.

Advisory Committees

Advisory committees serve important roles in shaping students' educational plans, assessing progress and conducting evaluations. The Master's Advisory Committee serves the student through the defense of the Master's Thesis, at which point the student appoints a Doctoral Advisory Committee. Committee membership is negotiated between students and their Major Professors, and is subject to approval by both the Psychology Graduate Coordinator and the Dean of the Graduate School. *Students are encouraged to select members with the greatest expertise in the relevant content areas (without concern for departmental affiliation)*. Committees are chaired by the Major Professors. The composition of the two committees detailed below may differ completely, or not at all.

Master's Advisory Committee (MAC): The MAC consists of three members (minimum) named before the end of the first semester. Typically, members are all UGA graduate faculty, although exceptions are permitted. For information on atypical committee membership see link. (http://grad.uga.edu/index.php/current-students/policies-procedures/academics/types-of-degrees-offered/masters-degrees/) Students develop plans for an initial first year "Program of Study" (in consultation with their Major Professors) and subject to approval by the MAC. Inclusive in the plans are a) projected course selection, b) approval of the first year research and c) evaluation of the written Master's Thesis and oral Defense.

44 Doctoral Advisory Committee (DAC): The DAC consists of three people (minimum) 45 named before the end of the first year of doctoral study. At least three members of UGA 46 Graduate Faculty are required. Typically, one non-Psychology faculty member is permitted but 47 not required. For information on inclusion of provisional graduate faculty or non-UGA faculty, 48 or consideration of committees with more than three members, see link. (49 http://grad.uga.edu/index.php/current-students/policies-procedures/academics/types-of-degrees-50 offered/doctor-of-philosophy-phd/doctor-of-philosophy-advisory-committee/) Students develop plans for the doctoral Program of Study, in consultation with the Major Professor and subject to 52 approval of the DAC. Additionally, the DAC is charged with a) conducting the Comprehensive 53 Written and Oral Examinations, b) approving the Dissertation Prospectus, and c) evaluating the 54 completed Dissertation and the final Defense. 55

Program of Study

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86 87 A Program of Study constitutes a minimal contract between students and the University, specifying the course requirements necessary for consideration of a graduate degree. Each Program of Study (and any subsequent changes) is developed in consultation with the Major Professor and must be approved by the majority of the appropriate advisory committee, the Graduate Coordinator, and the Dean of the Graduate School.

Master's Degree: The MS Program of Study is filed with the Graduate School by "Friday of the second full week of classes of the semester in which degree requirements are completed" (per Graduate School documents).

Doctoral Degree: A preliminary PhD Program of Study must be filed by the end of the first year of doctoral training. The final version of the document is submitted "prior to notification of the comprehensive examination." See link. (http://grad.uga.edu/index.php/currentstudents/policies-procedures/academics/types-of-degrees-offered/doctor-of-philosophyphd/doctor-of-philosophy-programs-of-study/)

Proseminar: Throughout the duration of their training, all BBS students enroll in the Proseminar each fall and spring semester (1 unit of 7100 course credit for master's students or 1 unit of 9100 for doctoral students). Topics vary to include: a) research content and methodology, b) teaching skills, and c) professional development. Guest speakers provide exposure to cutting-edge research and help build professional networks. The Proseminar provides multiple opportunities for students to present their research to program faculty and graduate peers. Students present talks in Year 2 (12 minutes), Year 3 (25 minutes) and Year 4 or 5 (50 minutes). Proseminar 7100 and 9100 credits count towards course requirements.

Second Year Talk: In the first year of training, all BBS students conduct a research project (PSYC 7000 "Master's Research"). The work is presented to the program faculty and student peers during the second year fall semester. All students complete this research requirement whether or not they pursue a master's degree at UGA. If not pursuing a Master's Degree, the course numbers 8330 ("Laboratory Apprenticeship") and 9000 ("Doctoral Research") allow students to use these courses on their doctoral Programs of Study.

Master of Science (MS) Degree Criteria

MS Degree: Admitted students are expected to complete the criteria for a MS degree. Initially, students confer with their MAC to develop a Program of Study that supports their training goals.

The MS Program of Study requires at least 30 hours of combined research and class hours. For Graduate School Master's Degree Requirements, see link.

(http://grad.uga.edu/index.php/current-students/policies-procedures/academics/types-of-degrees-offered/masters-degrees/)

Research Hours (9 hrs): Students complete exactly 9 research hours using the following combination: 6 hours via Psych 7000 and 3 hours via Psych 7300.

Course Hours (21 hrs): Students fulfill 21 hours, or the equivalent of 7 (3 hour) classes.

Course selection: Students take two classes in quantitative methods/experimental design (Psych 6420 and 6430), or equivalents approved by their Major Professors and the departmental Quantitative Committee. To fulfill additional hours, students use 7100, as well as departmental class offerings at the 6000 or 7000 level. The criterion may be satisfied in part by taking classes in other departments (as approved by Major Professor).

Master's Thesis

Written thesis: The Master's Thesis is written under the direction of the Major Professor, who approves the final version before it is distributed to the MAC. Per Graduate School policies, committee members are provided three weeks to read the document, and at least two members must approve the thesis as ready for a final defense.

Oral defense: The oral defense of the written Thesis is open to the public. "The defense is attended by all members of the committee simultaneously for the entire defense period. The defense consists of a public presentation followed by a private defense during which only the student and advisory committee will be in attendance" (per Graduate School documents). Non-chair committee members may attend via teleconference or videoconference, if necessary.

If the summary vote of the MAC is a Pass (with no more than one dissenting vote), then the Thesis and Defense of the Master's Degree are successfully completed. The MAC signs the necessary paperwork, the student has completed their master's requirements and initiates work on doctoral requirements. If the result is a No Pass, the student may request another opportunity to take the oral defense.

For important information on relevant Master's Degree timing, deadlines and other details determined by the Graduate School, see link. (http://grad.uga.edu/index.php/current-students/policies-procedures/academics/types-of-degrees-offered/masters-degrees/)

Doctor of Philosophy (PhD) Degree Criteria

PhD Degree: The PhD Program of Study and other PhD requirements are additional requisites beyond those completed for the MS Degree. Awarding of the PhD Degree is contingent upon a) a minimum of 30 hours of doctoral level class and research hours, b) satisfactory performance on both the written and oral Comprehensive Examinations, c) submission and successful oral

Defense of a Dissertation Prospectus, d) completion of a written Doctoral Dissertation and satisfactory defense of the dissertation in a final oral examination.

Class and research requirements: Of the 30 hours required for doctoral credits, students must complete 16 hours of 8000 - 9000 level courses (i.e., Proseminar and roughly five 3-hour classes). Additionally, students must complete 14 credit hours of research using 9000 ("Doctoral Research") and 3 required hours of 9300 ("Dissertation Writing").

Class selection: Students must take one additional quantitative, methods, or laboratory class (e.g., 8330 "Laboratory Apprenticeship") within or outside the department. Up to one intensive training institute taken in short-format outside the university may be substituted at the Major Professor's approval.

Doctoral Assessments (see detailed descriptions below; bolded events are open to the public)

- I) Doctoral Comprehensive Examinations
 - a. Written
 - b. Oral
- II) Dissertation Prospectus Oral Examination
- III) Dissertation Approval
- **IV) Final Defense of Dissertation**

Ia. Written Comprehensive Examination (WCE)

The doctoral written Comprehensive Examination requires selection of one of the three options presented below. This selection is made in careful consultation with the student's Major Professor and DAC, as each option requires different preparation and provides unique opportunities and challenges. Option 1 is a closed book structured essay examination (SEE) with reading lists and questions determined by the DAC. Option 2 is a scholarly, review-type comprehensive manuscript (CM) on a subject and in a format approved in advance by the DAC. Option 3 is a grant proposal (GP) on a topic approved in advance by the DAC.

For each written comprehensive exam option, the topic areas approved are considered by the DAC to be: a) of substantial importance, and b) generally reflective of the student's programs of study.

Each written comprehensive exam reflects student's independent work, and as such is not be reviewed by the major professor before being forwarded to the committee for evaluation. The evaluation criteria for each option requires that the work reflect graduate level performance as evidenced by theoretical and conceptual depth, logical structure, professional editing, and appropriate citations to the extant scientific literature. Finally, it is expected that all students abide by the UGA Academic Honesty Policy. Students who violate the Policy in the course of the written comprehensive exam will be reported to the appropriate UGA judicial body for further action.

(https://honesty.uga.edu/_resources/documents/academic_honesty_policy_2017.pdf)

Option 1: Structured Essay Examination (SEE)

The structured essay examination (SEE) evaluates breadth and depth of content knowledge.

Each DAC member provides the student with an extensive reading list tailored to the student's individual course of study. Based on the reading list, each member generates a set of

questions. Each day the student is provided with the questions from one member of the committee. The questions are not seen in advance and are designed to take approximately one-half day (3-5 hours) for the student to answer. The exam is taken over consecutive days (either in morning or afternoon sittings) in a room in the Psychology Department on a computer with no internet access, no notes or other reference materials, and no cell phone or other electronic devices.

Each member reads and grades each *individual* answer (Pass / Fail), and assigns an overall *summary* score. The Major Professor collates the individual scores to determine the status of each answer and the overall summary score. The DAC then considers the course of action (based on the summary score):

- Pass
- Conditional Pass
- No Pass

The Major Professor presents the student with the overall summary score, the collated comments and critiques, and the recommended course of action.

- (1) Pass The DAC (with no more than one dissenting vote) determines that the written comprehensive exam is successfully completed and the student prepares for oral exams.
- (2) Conditional Pass One or more issues need to be addressed before re-taking the SEE. The student is informed of the modifications and preparations required before the re-test, as well as the required time-line. The degree of revision is determined by the DAC and is generally commensurate with the degree of deficiency. The re-test is administered in the same manner as the original test and may range from re-taking a specific question to re-sitting for up to half of the exam.
- (3) No Pass Over half of the exam answers requires correction, or if the DAC otherwise considers the summary evaluation to be characterized by inadequate expertise and/or poor writing and editing skills. A student may request an opportunity to take a second SEE with the expectation that it covers new material. If the DAC agrees, the second SEE must be completed within a time period determined by the committee (although not longer than 6 months from the presentation of the feedback on the first SEE). A DAC may decline to grant a request for a second SEE, however, and would thereby dissolve itself by written announcement to the student and to the Graduate Coordinator. If the DAC dissolves itself, the student must form a new DAC before filing an appeal to the BBS program.

If the student has previously received a No Pass on any WCE option, then a second No Pass results in dismissal from the program at the conclusion of the current semester.

Option 2: Comprehensive Manuscript (CM)

The comprehensive manuscript (CM) is a scholarly review of the history, and theoretical or methodological significance of a subject presented in the manner of a journal review article or a meta-analysis.

The CM manifests the student's ability to review and critically evaluate a body of literature, and to formulate the resulting ideas, findings, and conclusions into an appropriately written document consistent with the breadth, depth, and format expected in a journal review article or meta-analysis.

Advance approval of the manuscript topic, objectives, and format must be documented for each committee member *before* a student may begin work on the CM. The specific mechanism by which a student's DAC seeks definition and provides approval will be determined by the members of the committee. Unless there are extenuating circumstances approved by the DAC, the CM is submitted for evaluation to the Major Professor within six months of the date the proposal is approved. Students are expected to write a manuscript that, with additional collaboration with the Major Professor and/or other colleagues, may be submitted to a high quality refereed journal.

The Major Professor distributes the CM to the committee. The evaluation procedure is structured after the peer-review process for journal publications. Evaluation of the CM is carried out independently by each member of the DAC as a scholarly peer review and each review is written using constructive commentary and sufficient detail. Reviews are submitted to the DAC chair, who distributes the package of committee evaluations to each member and schedules a meeting to determine the summary evaluation and the course of action (possibilities outlined below).

- Pass ("accept as is")

- Conditional Pass ("revise and resubmit")
- No Pass ("reject with no revision acceptable")

The Major Professor presents the student with the overall evaluation, the collated reviews, and the recommended course of action.

- (1) Pass The DAC (with no more than one dissenting vote) determines that the written comprehensive exam is successfully completed and the student prepares for oral exams.
- (2) Conditional Pass One or more issues must be addressed before the manuscript is reconsidered. The student is informed of the required modifications to be completed within a specified time period. Upon submission, the revision is accompanied by a cover letter including point-by-point responses to reviewers' comments. The revisions of the manuscript are evaluated in the same manner as the original document.
- (3) No Pass It is determined that the student has not demonstrated adequate expertise, mastery of the literature and/or writing and editorial skills expected at this stage in graduate study. If the result of the CM is a No Pass, the sole available option for a student who wishes to continue in the program is to meet the written comprehensive exam requirement by taking the structured essay exam (SEE). If the DAC agrees, the student may attempt the SEE one time (not two, as allowed for students who start with the SEE) to be completed within a time period determined by the committee (although not longer than 6 months from the presentation of the feedback on the CM). A DAC may decline to grant a request for a SEE, however, and would thereby dissolve itself by written announcement to the student and to the Graduate Coordinator of the Department of Psychology. If the DAC dissolves itself, the student must form a new DAC before filing an appeal to the BBS program.

If the student who has previously received No Pass on the CM receives a second No Pass on the SEE, it results in dismissal from the program at the conclusion of the current semester.

Option 3: Grant Proposal (GP)

The Grant Proposal (GP) incorporates relevant literature, premise and significance of the

research, and the theoretical and methodological expertise associated with programmatic development of a project.

The GP manifests the student's ability to critically evaluate a body of literature, formulate testable hypotheses, design a study with feasible methods, and articulate the significance of potential results in a research protocol that is consistent in depth and quality with proposals submitted to a granting agency.

Students prepare a "specific aims" section (1 page) plus a grant proposal (10-12 pages) that includes required elements of a federal grant application (e.g., NIH R01; such as hypotheses, research strategy (including significance, innovation, approach), study design and methods (including proposed data collection, analytic plan, power calculations), expected outcomes and potential concerns and solutions). A project summary/abstract, research timeline, and bibliography/references are required and not included in the page limit.

Advance approval of the grant topic, objectives, and format must be documented for each committee member *before* a student may begin work on the GP. The specific mechanism by which a student's DAC seeks definition and provides approval will be determined by the members of the committee. Unless there are extenuating circumstances approved by the DAC, the GP is submitted for evaluation to the Major Professor within six months of proposal approval approved. Successful attainment of grant funding is *not* required, but students are expected to write a competitive application that, with additional collaboration with the Major Professor and/or other colleagues, may be submitted to a grant agency for review.

The Major Professor distributes the GP to the DAC. The evaluation is structured after the grant review process. Evaluation of the GP is carried out independently by each member of the DAC as a scholarly critique of grant significance, innovation, and approach. Each committee member's review documents constructive critiques in sufficient detail. Reviews are submitted to the chair who then distributes copies of the all evaluations to each member. The Major Professor schedules a meeting of the DAC to determine the overall evaluation and the course of action. The student receives the following feedback:

- Pass ("accept as is")

- Conditional Pass ("revise and resubmit")
- No Pass ("reject with no revision acceptable")

The Major Professor relays the DAC's overall evaluation to the student, along with the collated reviews and the recommended course of action.

- (1) Pass The DAC determines (with no more than one dissenting vote) that the written comprehensive exam is successfully completed and the student prepares for the oral exams.
- (2) Conditional Pass One or more issues must be addressed before the proposal is considered for a Pass. The student is provided with the reviews and informed of the modifications required for re-evaluation. The communication stipulates a reasonable time period within which the revision of the GP is to be completed. The revision is accompanied by a cover letter including point-by-point responses to reviewers' comments. The revisions of the proposal are evaluated in the same manner as the original document.
- (3) No Pass It is determined that the student has not demonstrated adequate expertise, writing skill, or both on the grant proposal. If the result of the GP is a No Pass, the sole available option for a student who wishes to continue in the program is to meet the written comprehensive

exam requirement by taking the structured essay exam (SEE). If the DAC agrees, the student may attempt the SEE one time (not two, as allowed for students who start with the SEE) to be completed within a time period determined by the committee (although not longer than 6 months from the presentation of the feedback on the first SEE). A DAC may decline to grant a request for a SEE, however, and would thereby dissolve itself by written announcement to the student and to the Psychology graduate coordinator. If the DAC dissolves itself, the student must form a new DAC before filing an appeal to the BBS program.

If the student who has previously received No Pass on the GP receives a second No Pass on the SEE, it results in dismissal from the program at the conclusion of the current semester.

Ib. Oral Comprehensive Examination (OCE)

After a student passes the WCE, the DAC schedules and administers an oral examination at the earliest possible date (usually within one semester). The OCE is open to all members of the faculty and announced by the Graduate School two weeks prior to the exam date. The exam is attended by all members of the committee simultaneously for the entire period.

To prepare, the student confers with each committee member about expectations. Generally, the exam is inclusive within the student's field of stud and covers the contents of the thesis, as well as topics included in a student's Program of Study (and normally lasts between one and several hours). Each committee member generates questions collected by the DAC chair about one week in advance of the exam. The chair provides the student with a copy of the exam questions 30 minutes prior to the beginning of the meeting. The chair determines the order of questions, making sure that each member's questions receive equivalent time and attention from the student. When the submitted questions are finished, the floor is open for additional questions as the committee sees fit. Upon completion, the student is dismissed. The DAC deliberates on the quality of performance with each member eventually submitting a summary vote.

If the summary vote of the DAC is a Pass (with no more than one dissenting vote) then the OCE is successfully completed. The DAC signs the necessary paperwork and the student may initiate work towards the dissertation prospectus. If the result is a No Pass, the student may request another opportunity to take the OCE.

If the student receives a No Pass on the second oral comprehensive exam, it results in dismissal from the program at the conclusion of the current semester.

II. Dissertation Prospectus (DP)

The Dissertation Prospectus is submitted to the DAC in the traditional format of a dissertation proposal (e.g., introduction, literature review, rationale, proposed research/analysis methodology, etc.) developed under the direction of the student's Major Professor and in consultation with the other members of the DAC. The student submits their written DP to the DAC at least three weeks in advance of the oral DP (which necessarily occurs on a different day than the OCE). The DP may be electronic or hard copy, as determined by the DAC. The Prospectus is a critical component of the doctoral program, as committee approval is an agreement with the student that the research study is satisfactory for a Dissertation project. The meeting also clarifies the standards and expectations to be met in the completed written Dissertation.

A "Staple" Dissertation may be proposed with the support of the Major Professor. Generally, a staple dissertation consists of three manuscripts submitted for publication on which

the candidate is first author (and with work completed while a graduate student in the BBS program). The papers have a coherent theme and the student provides a detailed introduction and conclusion. This option is available only at the discretion of the DAC (with no more than one dissenting vote).

If the summary vote of the Dissertation Prospectus by the DAC is a Pass (with no more than one dissenting vote) then the appropriate forms are signed and filed with the graduate coordinator. For Graduate School policy on the Prospectus, see link. (
http://grad.uga.edu/index.php/current-students/policies-procedures/academics/types-of-degrees-offered/doctor-of-philosophy-phd/doctor-of-philosophy-dissertation-planning/)

III. Dissertation Approval

The Dissertation is written under the direction of the Major Professor, and with the input of the DAC. The Major Professor certifies the final version before distribution to the DAC. The Dissertation may be electronic or hard copy, as determined by the DAC. Committee members have three weeks to read the document and agree (with no more than one dissenting vote) that the Dissertation as ready for oral Defense. The Graduate Coordinator must notify the Graduate School of the defense date at least two weeks prior.

For Graduate School Policy see link. (http://grad.uga.edu/index.php/current-students/policies-procedures/academics/types-of-degrees-offered/doctor-of-philosophy-phd/doctor-of-philosophy-dissertation-approval-and-defense/)

IV. Dissertation Defense

As per Graduate School requirements: "The defense of the dissertation will be chaired by the student's Major Professor and attended by all members of the advisory committee simultaneously for the entire defense period. The defense will consist of a public presentation followed by a private defense during which only the student and advisory committee will be in attendance. The public presentation is open to anyone who wishes to attend. The student and committee chair must appear in person for both components of the defense, but other members may participate via teleconference or video conference". See link.

(http://grad.uga.edu/index.php/current-students/policies-procedures/academics/types-of-degrees-offered/doctor-of-philosophy-phd/doctor-of-philosophy-dissertation-approval-and-defense/)

At the conclusion of this examination, the DAC votes to Pass or Fail. Approval is pending no more than one dissenting vote and the vote is documented via completion of the appropriate Graduate School forms.

The Graduate School has specific and important deadlines for Dissertation submission with serious consequences for not complying. Please see link for details. (
http://grad.uga.edu/index.php/current-students/policies-procedures/academics/types-of-degrees-offered/doctor-of-philosophy-phd/doctor-of-philosophy-submitting-the-dissertation/)