

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY
Busch Campus, New Brunswick, New Jersey
Last Updated 09/01/26
2026-27 GRADUATE PROGRAM HANDBOOK
BEHAVIORAL & SYSTEMS NEUROSCIENCE (BSN)

BSN PhD students need 72 total credits to graduate. 30 are course credits derived from formal coursework (10 one-semester graduate-level courses), 18 are an individualized combination of BSN Work-in-Progress (WIP) course credits and non-thesis research credits, and the remaining 24 must be research credits.

30 formal course + 18 BSN WIP/non-thesis research + 24 research = 72 total credits

TEN CORE AND ELECTIVE COURSES TOWARDS THE PH.D. DEGREE

(Three credits each = 30 formal course credits)

1. Six CORE Courses are Mandatory (no choices)

830:521	Research Design & Analysis I
830:543	Conditioning & Learning
830:567	Cellular Neurophysiology & Functional Neuroanatomy
830:568	Behavioral & Systems Neuroscience
830:595	Methods in Neuroscience & Research Ethics (Previously 830:647)
830:642	Learning-induced Neuroplasticity: From Genes to Networks (required for students who start the BSN program in 2024 or later)

Students who started the BSN program prior to 2024 may take either 830:642 or an additional elective course.

2. One statistics elective course BSN-relevant courses outside the department may be chosen, with prior approval of the BSN Area Coordinator.

Examples of Statistics Electives:

830:522	Research Design & Analysis II
830:540	Mathematical Models of Learning & Cognition: Model Testing and Probabilistic Inference
960:555	Methods in Non-Parametric Statistics
960:567	Applied Multivariate Analysis
960:667	Multivariate Statistics

3. Three additional elective courses chosen from the pool of recurring BSN courses and rotating seminars. BSN-relevant courses outside the department may be chosen, with prior approval of the BSN Area Coordinator.

Examples of BSN-related recurring courses:

830:558	Psychopharmacology: Theory & Practice
830:585	Psychoneuroimmunology
830:514	Sensation & Perception
830:546	Memory & Attention
830:644	Behavioral Neuroepigenetics

Examples of BSN-relevant seminar courses (typically course numbers 503, 504, 646, or 647):

Federal Grant Writing Seminar
Big Questions in Neuroscience
Structure & Interpretation of Scientific Inquiry
Translational Neuroscience
Emotion & Motivation
Neural Circuitry of Mood Disorders
Computational Neural Plasticity & Behavior

18 BSN WIP COURSE PLUS NON-THESIS RESEARCH CREDITS TOWARDS THE PH.D. DEGREE

These 18 credits are an individualized combination of BSN Work-in-Progress (WIP) course credits and typically non-thesis research credits.

- a) BSN WIP Seminar Credits (1 credit per semester in the program) Starting Fall 2026, all BSN graduate students will register every semester for the **BSN Graduate Work-in-Progress (WIP) Seminar**. This is a 1-credit seminar that meets five times per semester, at which BSN graduate students come together to showcase works in progress, brainstorm new ideas, troubleshoot challenges, and learn from one another. By sharing research at all stages of development, the course will foster collaboration and scientific discussion and contribute to our vibrant BSN research community. While this new course (to be numbered 830:600) undergoes official approval by SAS, for the Fall 2026 semester it will be taught under 830:525 Development Survey I.

and any of the following:

- b) Non-thesis Research in Psychology
- c) Advanced Studies in Psychology
- d) Additional Formal Course Electives beyond the 10 that are required.

NON-THESIS RESEARCH (830: 501; 502; variable credit)

Course credit for research not directly related to master's or doctoral theses. Note that these are NOT counted toward required research credits.

ADVANCED STUDIES IN PSYCHOLOGY (830: 503; 504; 3 credits each)

Reading and individual study, involving written and oral reports. By arrangement on an individual basis with a faculty member.

24 ADDITIONAL RESEARCH CREDITS TOWARDS THE PH.D. DEGREE

You must also enroll to obtain 24 Research Credits toward your degree:

RESEARCH IN PSYCHOLOGY (830:701; 702; variable credit)

Research credit (usually after the first year) for research directly related to Master's or Doctoral Theses.

Students are encouraged to seek the guidance of the Psychology Graduate Program Coordinator (Miranta Louka) and the Vice Chair for Graduate Studies for how to incorporate non-thesis research, advanced studies, and research credits into their registrations. Timeline to graduation, different funding mechanisms for students (for example TA vs GA), and other factors can impact how these credits should be distributed across the five years in the program.

Sample BSN Course Curriculum

Year 1 (Years 1 and 2 courses cycle based on entry year)

Major Milestone: Become acquainted with program, faculty and departmental staff.

Fall 2026: 830:543 Conditioning & Learning, 830:521 Research Design & Analysis I, 830:525 BSN WIP Seminar

Spring 2027: 830:642 Learning-induced Neuroplasticity: From Genes to Networks, Statistics Elective, 830:525/600 BSN WIP Seminar

Year 2 (Years 1 and 2 courses cycle based on entry year)

Major Milestone(s): Master's Thesis Proposal (Fall)

Fall 2027: 830:567 Cellular Neurophysiology & Functional Neuroanatomy, 830:595 Methods in Neuroscience & Research Ethics, 830:600 BSN WIP Seminar

Spring 2028: 830:568 Behavioral & Systems Neuroscience, Elective, 830:600 BSN WIP Seminar

Year 3

Major Milestone(s): Master's Thesis Defense (Fall); Qualifying Exam (Spring)

Fall: Elective, 830:600 BSN WIP Seminar

Spring: Elective, 830:600 BSN WIP Seminar

Year 4

Major Milestone(s): Dissertation Proposal (Ideally Fall, Spring at the latest)

Fall: 830:600 BSN WIP Seminar

Spring: 830:600 BSN WIP Seminar

Year 5

Major Milestone(s): Dissertation Defense (Spring)

Fall: 830:600 BSN WIP Seminar

Spring: 830:600 BSN WIP Seminar

Formal Summary of Curriculum Requirements:

(CURRICULUM REQUIREMENTS FOR THE EN ROUTE MASTER'S DEGREE)

To obtain the Master of Science degree, a BSN student must have completed at least 6 research credits (830: 701; 702) and 24 course credits (including at least 18 course credits from CORE courses; no more than 6 Non-thesis Research credits may be counted toward the Master's degree).

CURRICULUM REQUIREMENTS FOR THE PH.D. DEGREE

To obtain the Doctor of Philosophy degree, a BSN student must have completed the Master's Degree, Qualifying exam, and a total of at least **24 Research credits** (830: 701; 702) and **48 course credits**. (Thus, BSN requirements comply with the Rutgers Graduate School minimum requirement of 72 credits, of which at least 24 must be research credits, and with the Psychology Graduate Program requirement of a minimum 24 research credits and 48 course credits.)

REQUIREMENTS FOR THE PH.D.

The following guide is meant as a reference for the Ph.D. requirements. These requirements are subject to change and it is the student's responsibility to cross-reference this document with guidelines from [The School of Graduate Studies](#) and to seek the guidance of the Psychology Graduate Program Coordinator at each stage.

To obtain the Doctor of Philosophy degree, a Behavioral & Systems Neuroscience student must have completed the Master's Degree, Qualifying Exam, and a total of at least 24 research credits (830: 701; 702) and 48 course credits.

Deadlines at a Glance:

Master's Proposal Approved: End of 3rd semester

Master's Thesis Approved: End of 5th semester

Qualifying Exam Passed: End of 6th semester

Dissertation Proposal Completed: End of 8th semester

Dissertation Defended: End of 10th semester

If a student enters the program with an acceptable Master's degree from another institution, then the deadline for completion of the Qualifying Examination is the end of the 5th semester.

3rd Year Graduate Student Representatives:

In their 5th and 6th semesters (or equivalent), every graduate student will serve as representative liaisons between the BSN graduate student community and BSN Faculty leadership via the Area Coordinator and Area Representative. Graduate student representatives can expect to serve community roles that may include service in faculty and graduate recruitment activities, faculty and/or student seminar organization, orientation for 1st year graduate students, participation in some Departmental Faculty Meetings, and other programmatic activities at the discretion of the Area Coordinator and/or Area Representative.

Annual Progress Review and Letters:

At the conclusion of each academic year, every BSN student receives a formal Annual Progress Letter from the Area Coordinator. This letter summarizes the student's academic and research progress for the year, as discussed during the annual review meeting with the BSN faculty.

The Annual Progress Letter serves the following purposes:

1. **Documentation of Progress:** Summarizes completed milestones (e.g., coursework, proposal defenses, qualifying exam, dissertation proposal).
2. **Identification of Next Steps:** Outlines expectations and recommended goals for the following year (e.g., completion of specific milestones).
3. **Extension Documentation:** Delays in meeting degree deadlines should always be communicated to the Area Coordinator. If an official extension of any degree milestone (e.g., Master's, Qualifying Exam, Dissertation Defense) has been granted due to medical, parental, or other approved circumstances, the letter will formally record the approved duration of the extension. When extensions are granted, the letter will also specify expectations for accelerating progress in subsequent semesters, when possible, in order to realign the student's timeline with the standard BSN milestone schedule.
4. **Signatures and Record Keeping:** Letters are drafted in conjunction with the advisor and all faculty members and signed by the area coordinator on behalf of the BSN faculty. The letters are kept on file with the Area Coordinator and the Psychology Graduate Program Coordinator as part of the academic record. Students are also encouraged to retain copies for their records.

THE MASTER'S THESIS

1. Master's Proposal

The student should establish a committee of *at least three faculty members (including the primary advisor)* to serve on the master's advisory committee by the beginning of the third semester. The committee normally consists of three Psychology faculty (including the primary advisor). A fourth member from outside the Department may be included if scientifically appropriate. The membership of the committee requires the approval of the Area Coordinator and Vice Chair for Graduate Studies. Forms for signatures indicating approval should be obtained from the Psychology Graduate Program Coordinator.

The student prepares a written proposal for the scientific content of the master's thesis. This document typically includes an introduction, methods, preliminary results (including figures), discussion, and references. The format and length of the proposal is flexible and at the discretion of the individual committee, but a typical length is 6 single-spaced pages plus references and figures. **A proposal format compatible with an NIH predoctoral NRSA (F31 award) is highly encouraged.** The proposal must be presented formally to the committee (either in a private meeting or as part of the master's day presentations), who discuss it with the student as a group and/or individually. Revisions may be required. Students who propose their Master's Thesis *before* the departmental Master's Day must participate by giving their proposal talk in the next scheduled Master's Day talk series event. **DEADLINE: The Master's proposal should be completed by the end of the 3rd semester.**

2. Written Master's Thesis

The student submits a written master's thesis consisting of the results of their research (either as originally proposed or amended as necessary with the informal consent of the master's committee). This document is intended to demonstrate the student's ability to perform effective neuroscientific research and prepare the results for publication in a high-quality scientific journal. The format is thus a full publication-quality scientific manuscript presenting the student's results. Since an important goal of the master's process is a research publication, a publication-quality paper will fulfill the written requirement. (Granting of the Master's Degree will be independent of whether the paper is accepted for publication.) This will be a full-length research paper written in the style of a high-quality peer-reviewed journal appropriate for submission to a neuroscience journal of the student's choice (e.g., *Journal of Neuroscience*). Two restrictions apply: 1) if the paper is submitted in a reduced format, such as a brief communication or a Nature report, then a separate, full-length paper would still be required for the Master's Thesis; and 2) the format must be consistent with the requirements of the Graduate School (see "[Style Guide for Thesis and Dissertation Preparation](#)", April, 2004). The latter concerns certain clerical details, rather than content or length, and states that style is to be determined by the student and advisor. In case of a discrepancy between Graduate School and journal requirements, two versions of the same document can be generated.

3. Oral Defense of the Master's Thesis

The master's thesis must be both: 1) presented in a public scientific talk given on Master's Day, and 2) defended before the Master's committee. Students who present on Master's Day will schedule a separate defense after Master's Day with their committee. Students who defend their Master's Thesis *prior to* Master's Day must still participate by giving their public talk on the next scheduled Master's Day.

For the defense, the student and members of the committee will have a closed meeting to discuss the written thesis and the public talk. Feedback from the committee will be communicated directly by the full committee (e.g., by calling the student back into the room after deliberations), through the committee Chair (the student's advisor), and/or through individual meetings as appropriate. The committee may approve the thesis as-is or require revisions to the thesis prior to approval. DEADLINE: Final approval is by vote of the committee members and should be obtained by the end of the 5th semester. The Master's Degree Application form (Master of Science) is required upon successful completion of the defense and can be obtained from the Rutgers School of Graduate Studies (SGS) website: <https://grad.rutgers.edu/academics/forms>. A copy of the finalized Master's form, thesis title page and abstract is also sent to the Psychology Graduate Program Coordinator.

THE QUALIFYING EXAMINATION

1. The Qualifying Examination Committee

The qualifying exam committee should be formed within one month following successful public presentation and defense of the Master's thesis. A committee comprised of three faculty examiners, other than the advisor, will be formed by the student. One member of the examination committee must be a member of the Psychology Graduate Faculty and only one outside member is permitted, if desired. Otherwise, the committee can be composed of either members or associate members of the graduate faculty. A chair of the committee (typically the advisor) will also be appointed. *If the advisor is an associate member of the Psychology graduate faculty, then an examiner who is a member of the Psychology graduate faculty can be appointed Chair.* Examiners must be approved by the Area Coordinator and Vice Chair for Graduate Studies (see timeline, below). **The Doctoral Qualifying Examination form is required upon successful completion of the exam and can be obtained from the Rutgers School of Graduate Studies (SGS) website: <https://grad.rutgers.edu/academics/forms>**

2. The Qualifying Examination

The major goals of the qualifying examination are to determine whether the student: (1) has depth of knowledge, mastery of concepts, and an integrative understanding of neuroscience commensurate with expectations of a doctoral candidate; (2) can apply their mastery to broader interests in neuroscience; and (3) the ability to persuasively communicate their mastery in writing and during an oral examination.

It is the student's responsibility to meet individually with the three faculty examiners to mutually develop a reading list and topic (a total of three topics, one topic per examiner). Once the committee is approved, the student will have a maximum of three months to write a review article covering each topic (a total of three review articles, all written in the three-month timeframe). Each article must be 4,000-8,000 words. There is no limit on the number of references in each article. Chatbots or other forms of AI may not be used to generate the articles, and the advisor may not be involved in writing or editing the articles. The three review articles comprise the written portion of the qualifying exam.

The student must also schedule a two-hour oral examination with the three faculty examiners and the student's advisor. The oral examination is to be held within three months of initiating the reading lists and topics to be developed with the committee. The oral examination will occur in-person. The student must submit the three review articles to the entire committee a minimum of two weeks before the scheduled date of the oral examination. Any faculty examiners with concerns based on the written articles about student preparedness for the oral examination must alert the entire committee at least one week prior to the oral examination. If the committee then determines that any of the written articles are insufficient, the schedule will be suspended for one month in which the student can revise and resubmit the articles.

The two-hour oral examination comprises the oral portion of the qualifying exam and will spend approximately 30 minutes on each topic and then end with 30 minutes of general discussion. The

student may also provide a short (5-10 minute) overview of the topics at the start of the exam. The advisor will be present during the examination in purely observational and organizational roles. As such, the advisor is not permitted to include themselves in the discussion during the oral examination. The advisor will also not vote on whether the student passed. The oral examination is meant to be a constructive conversation among colleagues where faculty examiners can probe the student's comprehensive understanding of the topics, possible hypotheses presented in or developed from the review articles, and other fundamental areas of neuroscience relevant to the topics, at the discretion of the committee members. The student should not prepare slides or presentations for the oral examination, as the conversation will be driven by the student providing answers to questions from faculty examiners. The discussions should synthesize and extend beyond the content covered in the review articles. All literature cited in the written portion of the exam (the three review articles) are also eligible for discussion, and the three faculty examiners may ask questions throughout the discussion of all topics.

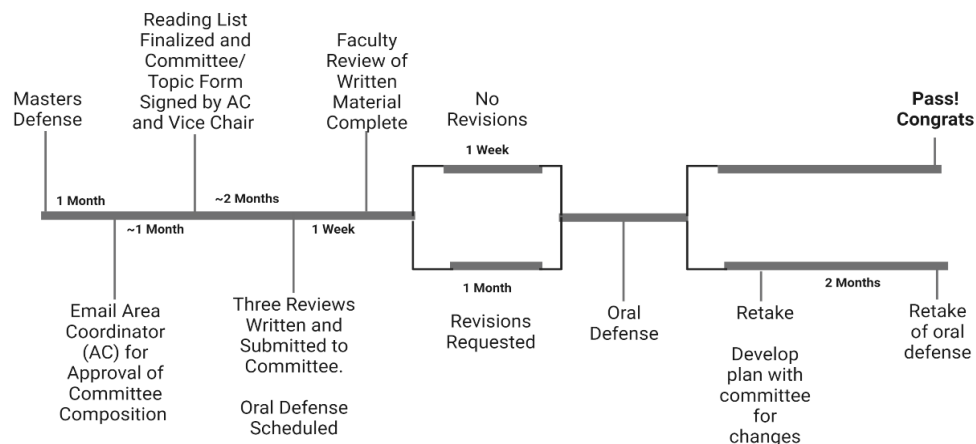
3. Grading the Qualifying Examination

Following the exam, each of the three faculty examiners (other than the advisor) will grade the student's performance on the written reviews and the oral examination for each topic. Examiners can 1) pass the student, 2) provide a conditional pass (requiring written edits and/or retaking specific oral examination topics), or 3) fail the student. If a conditional pass is provided, it is the responsibility of the student to provide written edits and/or schedule a retake of an oral examination topic per the instructions of the committee.

4. Retaking the Qualifying Examination

If the student receives a failing grade from any of the three examiners, then according to SGS guidelines, an academic warning will be issued (<https://grad.rutgers.edu/current-students/policies-procedures-students>). One "retake" will be allowed within two months after notification of the failing grade. The committee will decide whether the retake requires a new topic, a new written portion, and/or a new oral defense date. It is the responsibility of the student to schedule the retake within the allowed timeframe. If the student fails the "retake", then the program may initiate a process for dismissal according to SGS guidelines.

Timeline for the Qualifying Examination:



THE DOCTORAL DISSERTATION

1. The Doctoral Dissertation is expected to be an original empirical study, representing an independent research effort on the part of the student.
2. All research that involves experimental animals must be submitted to and approved by the Rutgers Institutional Animal Care and Use Committee (IACUC) prior to the collection of any data.
3. A formal proposal for the dissertation research must be presented to and approved by the student's committee. A formal meeting of the dissertation committee is required for approval of the proposal, and all members of the committee must approve a written proposal. **The proposal should be completed by the end of the fourth year (8th semester).**
4. Procedures and Regulations governing the Doctoral Dissertation:
 - a. **Ph.D. Dissertation Committee**
 - i. *Complete the Dissertation Committee Form. This form may be obtained from the [Department of Psychology website](#).* The completion of the form includes the concurrence and signature of the Area Coordinator and the Vice Chair for Graduate Studies. You will be notified of the approval of your Committee by the Vice Chair for Graduate Studies.
 - ii. The Committee consists of four members: A chairperson who must be a member of the Graduate Faculty and two persons who may be either members or associate members of the Graduate Faculty. If fewer than two members of the committee are Psychology Department faculty, the chair must write a memo explaining why departmental faculty not appropriate, and why selected committee members are appropriate. The fourth member of the Committee must be an "outside" member, defined as: a member or associate member of the Graduate Faculty in a program other than Psychology, or a qualified person from outside Rutgers University. In this case, approval must be obtained from the Vice Chair for Graduate Studies. Your Committee Chairperson must furnish a paragraph describing the qualification of the outside member, along with a vita and mailing address of the individual. The Dissertation Committee membership can, but need not, overlap with the Master's committee and/or the Qualifying Exam committee.
 - b. **Final Examination**
 - i. It is your responsibility to make sure you have completed the Area course requirements and that you have 48 course credits and 24 research credits for the Ph.D. degree.
 - ii. The date for the final defense must be cleared with the Behavioral & Systems Neuroscience Area Coordinator. Since dissertation orals are public, the Graduate Psychology Office must be notified at least 2 weeks before the scheduled orals (date, time, place, and title of dissertation) so that notices can be sent to faculty and students.
 - iii. Normally, the final draft of the Doctoral Dissertation is prepared by the student with the guidance of their advisor and then submitted to the remaining doctoral committee members **at least three weeks** prior to the date of the final defense.

Students are allowed one retake of the doctoral defense. The Graduate School allows one dissenting vote on the doctoral defense.

- iv. A booklet entitled "[Thesis Form: Style Guide for Thesis Preparation](#)" is available from the Graduate School, New Brunswick. You are also required to submit an **abstract not exceeding 350 words**.
- v. *Obtain the Final Defense Form (i.e., candidacy application) [from the Graduate School office](#)*. Submit to the Chairperson of your Committee. The Chairperson will record the results by e-signing Part II, A or B. It is then your responsibility to have it e-signed properly by your Committee (see below).
- vi. **Return to the Psychology Graduate Program Coordinator for processing prior to obtaining the Vice Chair for Graduate Studies' signature**. Completed forms must be e-filed with the Graduate School office no later than *three weeks before commencement* (i.e., no later than announced deadlines for October and January).
- vii. **After a successful defense, save and return your completed Final Defense Form along with one original title page signed by your committee in PDF format. (It can be one combined PDF or separate)**
 - a. Committee members and program director must sign page two.
 - b. Both course and research credits must be listed on page three.
 - c. Here is a sample [Title Page](#)
- viii. **The instructions for the final submission are found at:**
<https://grad.rutgers.edu/academics/graduation/checklist-phd-degree>
 - a. The final version of the dissertation is uploaded to:
<https://etd.libraries.rutgers.edu/login.php>
 - b. The completed submission is submitted to
sgs.degree.submissions@grad.rutgers.edu