Neuroscience Graduate Program

UNIVERSITY OF COLORADO
ANSCHUTZ MEDICAL CAMPUS

STUDENT HANDBOOK

Last updated: July 15th, 2025

https://www.cuanschutz.edu/graduate-programs/neuroscience/home

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Program Guidelines Disclaimer

As a member of the Neuroscience PhD Program, you are expected to adhere to all established policies and procedures of the University, the Office of Research Edcuation, the Graduate School and this PhD Program.

CU Anschutz University Policies https://catalog.ucdenver.edu/cu-anschutz/university-policies/

Office of Research Education https://medschool.cuanschutz.edu/ore/forms-and-resources

Graduate School https://graduateschool.cuanschutz.edu/forms-resources/resources

For any policies, please make sure to review the Graduate School Policies and Procedures.

Program Overview

The goal of the Neuroscience Graduate Program (NSP) is to provide a broad and solid foundation of understanding in neuroscience, and to train critical thinkers, who identify important problems, generate experimentally testable hypotheses, and who draw significant conclusions from results of their ongoing research in a specific area of neuroscience. In addition, we aim to foster the development of students who approach research in a responsible, ethical, and professional manner. After the initial period of coursework, students choose their specialty fields from a diverse list of topics. They proceed with research in their specialty areas until the generation and defense of a thesis leads to the award of a Ph.D. in Neuroscience.

Program & Office of Research Education Contacts

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- Point of contact for ORE administrative concerns, organizational planning and ORE leadership availability

BSP & MSTP Requirements

Students transferring to the Neuroscience Program from the Biomedical Sciences (BSP) or Medical Scientist Training (MSTP) programs may have different credit/course requirements (see appendix 1). Applications for transfer will be evaluated based on thesis lab availability, transcripts, and performance on the preliminary exam and in rotation labs. It is important to understand that transfer from either program into the Neuroscience Program depends on a Neuroscience Program faculty member agreeing to accept the student into her/his lab for their thesis work.

MSTP Students should enter a thesis lab with 27-33 graduate credits, including graduate core. They have also completed/will complete the MSTP Preliminary Course focused on grant writing in Spring term of their transfer year. This course covers F31 grants, but also F30 grants which are specific to dual-degree trainees. The MSTP administration will review student transcripts with the PhD Program Administrator at the time of transfer and will confirm that all expected graduate credits have been posted for program review and evaluation.

MSTP students have already selected and been accepted into a thesis lab within the selected PhD program. They will enter the program under this lab's support immediately upon transfer and should not incur charges to the PhD program at any point in training, absent the need for gap funding/support. As such, please consider this transfer to be equivalent to a second year PhD student. Time to degree is a very important metric for the NIH and the program's T32 grant. MSTPs are expected to complete their PhD training within four years of entering lab. Of course, mitigating circumstances can occur. The MSTP Administration should be alerted to any significant progress concerns which may impact a student's ability to graduate within the expected time frame. This can be accomplished by meeting, email, or committee meeting notes as appropriate.

- MSTP students should contact MSTP Administration to obtain the program specific lab mentor agreement to review lab mentor responsibilities, curriculum requirements and other expectations related to the research portion of training. **MSTP students must have thesis committee meetings every 6 months** regardless of their PhD program. Each MSTP student's thesis committee should have a faculty member representing MSTP. Students should discuss MSTP faculty representation with the Director or Associate Program Director to identify suitable candidates.
- Throughout the Thesis stage of training, MSTPs are required to register for the *Longitudinal Foundations of Doctoring* (FOD) course in 2 terms annually (Fall and Spring). They will enroll in the *Capstone Return-to-Clinics* course in their last year of thesis training, replacing FOD in the spring term. The MSTP mentor is responsible for covering the costs for these courses and agrees to this as part of the MSTP-specific mentor letter.

Curriculum Overview

Registration Process

- Academic Calendars (see The Graduate School calendar)
- Course Catalog (See Neuroscience and Biomedical Basic Science for relevant course descriptions)
- Register for Classes (see The Graduate School)
    - All basic science PhD students must register for a minimum of 5 credits (fall and spring semesters), 1 credit of 8990 (summer semester), and anything above the minimum credit level will need approval from faculty mentor.

- First year students, BSP and MSTP students should work with their program directors, program administrators, and faculty mentors as there will be additional credit requirements associated with their progress in the program.
- The payment of tuition, fees and student health insurance occurs the week following the deadline for semester add/drop period, which can be found on the academic calendar. The Program Administrator will complete the process of submitting the appropriate form to the Bursar's Office. For those students receiving financial aid, please work with the Program Administrator to avoid any disruption in aid awarding.

Year 1 Requirements

Fall Semester: Required Courses		
Course Title	**Registration Information**	**Credits**
NSP Bootcamp	No registration.	No Credit
Foundations in Biomedical Science	BMSC 7806	6
Introduction to Neuroscience	NRSC 7501	1
Developmental Neurobiology	NRSC 7615	3
Neuroscience Seminar	NRSC 7662	1
Neuroscience Journal Club	NRSC 7663	1
Research in Neuroscience (Rotation 1)	NRSC 7650 (001)	1
Research in Neuroscience (Rotation 2)	NRSC 7650 (002)	1
Spring Semester: Required Courses		
Course Title	**Registration Information**	**Credits**
Cellular and Molecular Neurobiology	NRSC 7600	3
Fundamentals of Neurobiology	NRSC 7610	3
Neuroscience Seminar	NRSC 7662	1
Neuroscience Journal Club	NRSC 7663	1
Research in Neuroscience (Rotation 3)	NRSC 7650 (001)	1
Summer Semester: Required Courses		
Course Title	**Registration Information**	**Credits**
Doctoral Thesis	NRSC 8990	1
Research (Pre-Comps) *only if instructed to register*	NRSC 7650	3

- **Rotations and Rotation Seminar**
  Students are required to complete three lab rotations in their first year. At the end of each rotation, students give a seminar to develop public presentation skills—key for career success. Talks are typically 10-12 minutes, though the exact length may vary yearly, and will be announced by the GTC Chair. Students are expected to rehearse with their lab and GTC mentors before the public presentation.

After identifying a rotation mentor, students will submit the ORE Milestone Rotation Request. The Program will communicate instructions and submission deadlines. Three forms will be submitted throughout the academic year: one for each rotation.

For additional information on rotations and rotation seminars, including guidelines for presentations, please see appendix 2.

- **Graduate Training Committee Meetings**
  Each first-year student is assigned a GTC mentor and should meet regularly to discuss progress, rotation choices, and rehearse rotation talks. GTC mentors may continue supporting students in later years, helping monitor progress and resolve issues. The GTC Chair also serves as a liaison to address any scientific or interpersonal concerns during the student's training.

- **Preliminary Exam**
  The Preliminary Exam, taken in the summer after Year 1, provides faculty with an important tool to evaluate the students' broad knowledge base obtained from coursework in Year 1, as well as their scientific writing capabilities. Please see the Examinations Section for more information.

- **Transfer to Thesis Lab**
  Students should reflect on their rotation experiences and discuss lab choices with rotation mentors and the GTC. Students transfer to their thesis labs on July 1st. The chair of the GTC, Program Directors, and the Program Administrator should be notified of the choice of mentor on or before June 15, except in the case of a 4th rotation. See appendix 2 for information on 4th rotations. After the thesis lab is chosen, the Program Administrator will route the Predoc Financial Support Agreement for signatures. It is ultimately the student's responsibility to identify a thesis lab.

- **Residency**
  Per University policy, it is required that students begin the process of establishing their residency as soon as they accept their offer to join the PhD program. This process must be started promptly to ensure you meet the necessary deadlines by the end of your first year. For more information, please visit the University website – Residency. Students who do not obtain Colorado Resident Status as defined by the Registrar (except for international students) will be required to pay the difference between in state and out-of-state tuition beginning the Fall of year 2.

- **Individual Development Plan**
  Students are required to complete an individual development plan each year. See appendix 7 for a template.

Year 2 Requirements

- Minimum registration requirement for full-time graduate students is 5 credits. Anything above 5 credits must be approved by faculty mentor.

- **Requirement in Quantitative Neuroscience:** NSP students in Year 2 or 3 are required to take a minimum one-credit elective course that provides training in quantitative methods in neuroscience. It is recommended students complete this requirement prior to the comprehensive exam, but it can be completed later if necessary. Students can choose from one of six quantitative

elective courses that are offered in the fall, spring, or summer terms to satisfy this requirement. Some but not all of these courses are offered through NSP; not all courses are offered every year. Students should consult with their thesis mentors to determine the course most suitable for their thesis projects. The courses do not have to be taken prior to a student's Comprehensive Exam. NSP has some flexibility with the courses that satisfy the Quantitative requirement. Students who find an alternate course that could also fulfill the requirement should consult the NSP Program Directors.

- BIOE 5053: Optics and Microscopy in Biomedical Research
- MOLB 7950: Practical Computational Biology for Biologists
- ELEC 5375: Engineering Neuroscience
- NRSC 7612: Nervous System Modeling with NEURON
- NRSC 7617: The Biophysics of Ion Channels
- NRSC 7657 Workshop in Advanced Programming for Neuroscientists

Fall Semester: Required Courses		
Course Title	**Registration Information**	**Credits**
Ethics in Research	BMSC 7811	1
Statistics and Data Analyses for the Biomedical Sciences	BMSC 7820	3
Neuroscience Journal Club	NRSC 7663	1
Research in Neuroscience (Pre-Comps)	NRSC 7650 Section 0V3	1-5 (variable)
Spring Semester: Required Courses		
Course Title	**Registration Information**	**Credits**
Grant Writing Course	NRSC 7661	1
Neuroscience Journal Club	NRSC 7663	1
Research in Neuroscience (Pre-Comps)	NRSC 7650 Section 0V3	1-5 (variable)
Summer Semester: Required Courses		
Course Title	**Registration Information**	**Credits**
Doctoral Thesis	NRSC 8990	1

- **Seminars & Research Update Talks**
  - 2nd Year students are expected to attend at least 50% of in-person seminars.
  - Seminars are Tuesdays, 12-1pm

- **Comprehensive Exam:** Some students will be ready to plan their comprehensive exam late in year 2. Please see the Examinations Section for more information.

- **Individual Development Plan**
  Students are required to complete an individual development plan each year. See appendix 7 for a template.

Year 3+ Requirements

- Minimum registration requirement for full-time graduate students is 5 credits. Anything above 5 credits must be approved by faculty mentor.

- Students defending in the current semester must register for 5 credits of NRSC 8990. If a student is defending in between semester dates as defined by the Academic Calendar, the student must register for 5 credits of NRSC 8990 in the proceeding semester of the scheduled defense date.

- **Requirement in Quantitative Neuroscience:** NSP students in Year 2 or 3 are required to take a minimum one-credit elective course that provides training in quantitative methods in neuroscience. It is recommended students complete this requirement prior to the comprehensive exam, but it can be completed later if necessary. Students can choose from one of six quantitative elective courses that are offered in the fall, spring, or summer terms to satisfy this requirement. Some but not all of these courses are offered through NSP; not all courses are offered every year. Students should consult with their thesis mentors to determine the course most suitable for their thesis projects. The courses do not have to be taken prior to a student's Comprehensive Exam. NSP has some flexibility with the courses that satisfy the Quantitative requirement. Students who find an alternate course that could also fulfill the requirement should consult the NSP Program Directors.
  - BIOE 5053: Optics and Microscopy in Biomedical Research
  - MOLB 7950: Practical Computational Biology for Biologists
  - ELEC 5375: Engineering Neuroscience
  - NRSC 7612: Nervous System Modeling with NEURON
  - NRSC 7617: The Biophysics of Ion Channels
  - NRSC 7657 Workshop in Advanced Programming for Neuroscientists

Fall Semester: Required Courses		
Course Title	**Registration Information**	**Credits**
Doctoral Thesis (if post comps)	NRSC 8990	1-5 (variable)
Research in Neuroscience (If pre-comps)	NRSC 7650 Section 0V3	1-5 (variable)
Electives	Variable	Variable
Ethics in Research (applicable Fall Year 6)	Discuss with Program Administrator if applicable	No Credit
Spring Semester: **Required Courses**		
Course Title	**Registration Information**	**Credits**
Doctoral Thesis (if post comps)	NRSC 8990	1-5 (variable)
Research in Neuroscience (If pre-comps)	NRSC 7650 Section 0V3	1-5 (variable)
Electives (if applicable)	Variable	Variable
Summer Semester: Required Courses		
Course Title	**Registration Information**	**Credits**
Doctoral Thesis	NRSC 8990	1

- **Seminar & Research Update Talks**
  - 3rd Year and beyond students are expected to attend at least 50% of in-person seminars.

- Post-Comps Students must give a Thesis Update Talk during seminar once per year.
- Seminars are Tuesdays, 12-1pm

- **Comprehensive Exam:** Students must pass the comprehensive exam by the end of Year 3. Please see the Examinations Section for more information.

- **Individual Development Plan**
  Students are required to complete an individual development plan each year. See appendix 7 for a template.

- **Thesis Committee Meetings:** Students are required to have a thesis committee meeting every 6 months. Additional information and requirements can be found in Appendix 3.

- **Thesis Defense:** Students typically defend in years 4+. Please see the Examinations Section for more information.

Examinations and Evaluations

Preliminary Exam

Every first-year student takes the Preliminary Qualifying Exam at the end of the first year of graduate school. The exam committee is comprised of three faculty members, representing the three main first-year neuroscience courses (NRSC 7600, 7610, and 7615).

- **Format of Preliminary Exam:** The exam includes both written and oral components. The written exam is typically an exercise in which students write a Journal of Neuroscience Journal Club-style review of a recent scientific article chosen by NSP faculty. Students are provided with the article in late May/early June and are given 10-12 days to write the review. The oral exam, conducted after the written review is turned in, lasts about 45 minutes. Questioning during the oral exam typically starts around the paper on which students have written their review, but examiners typically diverge into broader content from the first-year courses. The examiners may also alter the scope of questioning based on perceived strengths and weaknesses of the student.

- **Grading of Preliminary Exam:** The exam is graded Pass/Fail/Pass with Conditions. If formal conditions or other deficiencies are noted during the exam, the student will develop a plan to address these weaknesses. In some cases, re-examination may be required. In all cases, problems noted during the exam should be addressed by the end of the fall semester of the second year. The exam rubric can be found in appendix 3.

- **Policies for BSP Students:** BSP students who plan to join NSP typically take the NSP Preliminary exam. Most BSP students will have taken only two of the three main first-year neuroscience courses at the time of the exam. The committee will take this into account when grading. If a BSP student takes a Preliminary Exam offered by a different program, NSP will honor the results of that exam.

- **Policies for MSTP Students:** NSP will honor the results of the MSTP specific Preliminary Exam.

Comprehensive Exam

At the beginning of the second year of study NSP students will begin preparing for the Comprehensive Exam. It is highly recommended that students familiarize themselves with the Comprehensive Exam policies and deadlines and discuss forms and timelines with the Program Administrator well ahead of the planned examination so all required paperwork can be completed on time. A student must be registered at the time he/she takes the Comprehensive Exam.

- **Timing and requirements of the Comprehensive Exam**:
  - Students are required to take the Comprehensive Examination for admission to candidacy for the Neuroscience Ph.D. before the end of their third year.
  - All students who take the Comprehensive Exam must have passed a Preliminary Exam.
  - At the time of taking the Comprehensive Exam, students must have taken or be enrolled to take 30 didactic course credits.
  - Students who have joined NSP directly must also have passed all required coursework from Year 1 and 2.
  - Students who joined NSP through BSP or MSTP should review the requirements in appendix 1.

- **Formation of Comprehensive Exam Committee:**
  - The Comprehensive Exam Committee shall consist of a minimum of five Graduate Faculty members.
    - The majority of the members, including the chair, must be from the core training faculty of the Neuroscience Program (have a regular Neuroscience Faculty Appointment in the Graduate School Faculty Directory.)
    - The student's dissertation advisor may be on the examination committee – i.e., ask questions during the exam – but cannot chair the committee.
    - Exam Committees may include faculty members from outside the Program's training faculty, including faculty at other institutions.
  - Selection of committee members should be done at least ~2 months prior to when students would like to take the Comprehensive Exam.
    - The student should discuss with his/her thesis advisor an appropriate group of faculty, then contact the faculty members to determine their interest. Often faculty like to meet with the student to discuss the project prior to committing to being on the committee.
    - Once a student has a group of interested faculty, he/she should submit the faculty list to the chair of the GTC for approval. The GTC must approve the composition of the Comprehensive Exam committee prior to scheduling the examination.
  - As you prepare for your Comprehensive Exam, please ensure that all your committee members have a faculty appointment listed in the Graduate School Faculty Directory.

- **Required Forms to Schedule Comprehensive Exam:**
  - Graduate School - Resources & Forms - CU Anschutz
    - App Candidacy form
    - Exam request form
  - Once a date has been set with your committee, you must contact your Program Administrator to initiate forms. You will also discuss room bookings at this time. All forms must be submitted to the Administrator at least a month prior to the exam date.

- **Format of the Comprehensive Exam:**
  The exam centers on a student-written thesis proposal in NIH NRSA format (Specific Aims + Research Strategy, max 7 pages). Preliminary data is helpful but not required. Students should work with their advisors to develop their aims, get feedback on the proposal and prepare for the oral exam. Advisors should not directly edit the written document but should provide general comments and feedback. The proposal must be submitted to the committee at least **two weeks before** the exam. Students must demonstrate deep scientific understanding and defend their proposal. The exam tests broad knowledge beyond coursework. Students may consult committee members beforehand about expected subject areas.

  The exam includes:
  - A 30–45-minute seminar open to the program
  - Audience Q&A
  - A closed session with the Comprehensive Exam Committee
    - With the student out of the room:
      - The thesis advisor will provide the Exam Committee with his/her assessment of the student's progress to date.
      - The Exam Committee chair will also summarize the student's academic progress to date (obtained from the student's electronic file provided by the program administrator) and also present to the rest of the committee the different criteria on which the evaluation of the student will be based (see Evaluation Criteria below).
    - With the student in the room:
      - For a period lasting 1.5-2 hours, faculty on the Exam Committee will ask the student questions.
    - With the student out of the room:
      - The committee will then explicitly discuss each of the criteria, apply a rating in each area, and then decide whether to give the student an overall score of Pass, Pass with Conditions, or Fail.
    - Communicating outcome
      - The student will return to the exam room and be told the outcome of their exam.
      - The committee chair will inform program directors of the outcome immediately following the exam.
      - All Committee members will sign the DocuSign form, indicating the result of the exam. If a pass w/conditions is given, a document describing those conditions and timeline for completion will be attached within the exam form.

- **Grading the Comprehensive Exam:**
  The exam is graded Pass/Pass-with-Conditions/Fail. With the Pass-with-Conditions grade, the Exam Committee outlines remedial actions to be taken by the student and a timeline. The Exam Committee also completes an evaluation of the student's performance. Within this report, the Committee scores the student in a variety of different areas, including knowledge of concepts and the quality of the oral presentation. The Committee typically also provides constructive scientific feedback on the proposed project.
- Please see appendix 4 for Comprehensive Exam Rubric.

Thesis Defense

- **Thesis Committee Formation:**
  - The Thesis Committee must consist of at least five Graduate Faculty members. Most commonly, the composition of the Thesis Committee is the same as the Comprehensive Exam Committee, but this not required.
  - The majority of the committee must be Neuroscience Program members.
  - The faculty mentor must be on the committee but cannot be the chair of the committee.
  - The chair of the committee must be a Neuroscience Program member.
  - Please ensure that all your committee members have a faculty appointment listed in the Graduate School Faculty Directory.

- **Timing and requirements of the Thesis Defense**:
  - Students must have submitted for publication at least one first-author manuscript on research that is core to their thesis topic. Ideally, the paper will be accepted or have gone through a round of peer review at the time of scheduling the defense. The faculty mentor and committee have discretion in requiring that the manuscript is accepted, rather than only submitted, prior to scheduling the defense. In general, a student's thesis committee may place additional requirements, recognizing that one first-author manuscript may not be sufficient.
  - At the time of the defense, the student must have taken or be registered for at least 30 NRSC 8990 course credits.
  - If defending after the semester ends you must register for 5 credits of 8990 in the proceeding semester. (Thesis defenses must be tied to the end of the semester deadlines dates please see the links below)
  - Students should schedule a defense date at least 6 weeks in advance of the anticipated date.
  - Students are required to submit their final thesis to the Thesis Committee at least two weeks prior to the defense date.
  - A student must receive approval from the thesis committee prior to moving forward to schedule a defense date.
    - The thesis committee has discretion to determine what students must provide, and when, prior to giving approval.
    - A determination may be made based on one of the following:
      - (1) a student's presentation at a final thesis committee meeting;
      - (2) an outline of the student's thesis that is e-mailed to the thesis committee at least 6 weeks in advance of when a student would like to defend; or
      - (3) a student's complete written thesis that is sent to the committee at least 6 weeks in advance of when a student would like to defend.
    - The third option is typically reserved for when there are questions about the sufficiency of a student's work for a Ph.D. that cannot be adequately addressed by a thesis outline.
    - Whether option 1 or 2 is used is typically unrelated to a student's performance but rather has more to do with the timing of a final thesis committee meeting with respect to thesis completion.
    - Often a final thesis committee meeting occurs 3-6 months prior to the anticipated thesis completion and the committee may determine that a written outline of the

thesis (rather than a full meeting) is sufficient for determining whether a student may move forward to schedule a defense.
- It is the responsibility of the committee to provide timely feedback to the student when the student submits materials to the committee to determine if the student is ready to defend.
- If an outline has been sent (option 2), the committee must provide feedback within one week.
- If the complete thesis has been sent (option 3), the committee must provide feedback within two weeks.

➢ **The Written Thesis**

NSP thesis should consist of several chapters. These include a description of the background that provided the basis for the project (Chapter 1), one or more data chapters, and a final chapter that discusses how the student's body of work fits with other work in the field and some ideas for future research directions. A data chapter may be one of the research publications on which the student is an author or incomplete work that did not result in a paper but that can nevertheless serve a basis for future studies. In cases in which a publication is used as a data chapter, it is important that the student outline the contributions of the different authors of the paper, including those of the student (e.g. in a paragraph at the end of the introduction to that chapter). It is highly recommended that students look at Ph.D. theses from prior NSP students prior to writing his/her thesis. This can be useful, for example, to get guidance on how broad the scope should be for the background provided in Chapter 1. The written thesis will be a published document on ProQuest.

➢ **Thesis Defense**

- The thesis defense consists of:
  - ~50-minute oral presentation by the student
  - A 1-2-hour closed-door meeting with the Thesis Committee.
- The closed-door defense begins with the Thesis Committee Chair outlining the goals and mechanics of the meeting.
  - Typically, the meeting consists of faculty taking turns asking questions.
  - Based on the written thesis document, the oral presentation, along with interactions at the defense, the Thesis Committee will assign a score of Pass, Pass with Conditions, or Fail to the defense.
- Most commonly, a student will Pass his/her defense, although Thesis Committee members may have specific points that they would like a student to address in the written thesis document. These are conveyed either in writing or in one-on-one meetings.
- In cases in which there are more significant deficiencies in the thesis, the Thesis Committee may assign a score of Pass with Conditions. When this occurs, the Thesis Committee chair will provide a timeline for the student to address the concerns in a revised thesis document. This timeline must be within constraints imposed by the Graduate School. According to Graduate School policy, the final, formally approved dissertation must be submitted to the Graduate School within 60 days of the thesis defense unless an extension is approved by the Graduate School.

➢ **Required Forms:** Graduate School - Resources & Forms - CU Anschutz

- Below forms must be submitted 4 weeks before the exam:
  - Biosketch Form (This is a graduate school form, not the NIH form)

- Exam request form
- The Thesis Approval form should be initiated prior to your exam date and completed by Graduate School Deadlines (see Deadlines tab, Graduation Deadlines Thesis for appropriate year).
- Watch how to prepare the correct forms and upload your dissertation.
- The Defense Report, which is the form on which Committee members indicate the score of Pass, Pass with Conditions, or Fail, will be sent directly to the committee by the Graduate School.

➢ **Thesis Defense Resources and Dissertation Guidelines**
- Thesis & Dissertation/ProQuest Format & Guidelines
- ProQuest General Information for Submitting Dissertation & Thesis page 13 on Graduate School website
- Graduate School Deadlines, Forms, Policies

Policies and Procedures

Neuroscience Program

The Neuroscience Program has specific policies and procedures which may go beyond those of ORE, the Graduate School, and the School of Medicine. These policies must be adhered to at all times. **Failure to adhere to any of these policies is grounds for dismissal from the Neuroscience Program.**

➢ **Satisfactory Progress & Good Standing:** Students in the Neuroscience Program must make satisfactory progress each academic year in order to remain in good standing with the program. Students who are not in good standing may be recommended for dismissal from the program by the Program Directors and the Graduate Training Committee. The list below provides a baseline for what is considered to be satisfactory academic progress but should not be considered a comprehensive definition of good standing.
- **Requirements Applicable to All Program Years:**
  - Students must receive a grade of **B or better** in all Neuroscience courses. Neuroscience courses are identified by the course code NRSC. A B- or below is considered a failing grade.
    - A failing grade between a **C and a B-** in a NRSC course may be remediated at the discretion of the course director and the GTC. Remediation will not change the course grade; however, it will remove the requirement to retake the course. Remediation usually includes independent study & a make-up exam. However, this is a one-time courtesy. Students will not be allowed to remediate multiple courses or remediate the same course more than once.
    - A failing grade **below a C** or **lack of remediation options** (i.e. student already used their one-time remediation courtesy or the coursework is not suitable to a remediation plan) in a NRSC course require retaking the course. The student must pass the course retake with a B or better.
  - Students must receive a grade **B– or better** in all required non-NRSC courses. Grades below a B- are considered failing grades. Only **one failing grade** is allowed across all required courses.

- Students must maintain a GPA of **3.0 or higher.** Students whose GPA drops below a 3.0 will be placed on academic probation and must raise their GPA above a 3.0 in two semesters (Fall & Spring; Spring & Summer; Summer & Fall).
- Students must adhere to the ORE Honor Code (found under ORE Policies).
- Students must adhere to the Neuroscience Program AI Policy and Leave Reporting Policy.
- Students who are no longer able to remain in their thesis laboratory must secure a new thesis laboratory to continue in the Neuroscience Program. Deadlines to do so will be clearly outlined in writing. Failure to secure a new thesis laboratory by the communicated deadlines will result in dismissal from the program.
- Students must be respectful of all other members of the CU Anschutz community, including but not limited to other students, faculty, program and ORE staff, and laboratory personnel. While interpersonal conflicts can often be solved through conflict resolution, repeated interpersonal conflicts that interfere with a student's ability to progress in the program are grounds for dismissal.

- **Program Year 1:** In addition to all requirements applicable to all program years, students in their first year of the program must meet the below requirements.
  - **Students must secure a thesis laboratory** and communicate that laboratory choice to the program by June 15th. The exception to this rule is for students who are approved by ORE and the Program Directors for a 4th rotation. **4th rotations must begin by July 1st.** Failure to secure a 4th rotation laboratory by July 1st is grounds for dismissal. If the 4th rotation laboratory does not result in the successful selection of a thesis laboratory, the student will be dismissed from the program.
  - **Students must pass the preliminary exam.** Students who pass the preliminary exam with conditions must meet the conditions of the exam by the stated deadline.
- **Program Year 2:** In addition to all requirements applicable to all program years, students in year 2 are expected to work diligently in their thesis laboratory while exploring and finalizing their plans for their comprehensive exam proposal. Thesis mentors and students are encouraged to keep lines of communication open and bring forward any concerns to the Program Directors and the GTC to prevent situations from escalating towards a student dismissal from the lab and/or program.
- **Program Year 3:** In addition to all requirements applicable to all program years, students in year 3 must meet the below requirements.
  - **Students must pass the comprehensive exam** by the end of year 3, defined as the last day of the summer term. If a student passes with conditions, those conditions may extend beyond the end of summer term.
  - Students are required to have a thesis committee meeting within 6 months of passing their comprehensive exam and every 6 months after until they defend. If a student passing comps at the end of year 2 or early in year 3, they must

have a thesis committee meeting and the expectations of those meetings under Program Year 4+ apply.

- **Program Year 4+:** In addition to all requirements applicable to all program years, students in year 4 and beyond must meet the below requirements.
  - Students must meet with their thesis committee **every 6 months**. Students are responsible for initiating the planning of these meetings. If a student is unable to schedule a meeting due to faculty being unavailable or non-responsive, students should make their committee chair, mentor, and the GTC aware so that they may intervene on the student's behalf.
  - If the Thesis Committee deems progress towards the thesis project inadequate, the student and thesis mentor will meet with the Program Directors, the Thesis Committee chair, and the GTC to ascertain whether the student can continue in the program. A recommendation of dismissal is a possible outcome of these deliberations. If the student is allowed to proceed further, an additional unsatisfactory assessment of thesis work will be cause for a mandatory recommendation for dismissal to the Graduate School without further review, subject only to appeal by the student (see appeals).

- **Appeals:** A student will have 7 days to appeal any decision by the GTC that affects them, including a recommendation for dismissal from the program. Such appeals must be in writing and emailed to the Program Directors and chair of the GTC. The GTC will respond to appeals within 7 days of receipt. Students will be given the opportunity to meet in person with the GTC to discuss their appeal if they desire.

  Unchallenged decisions or decisions after appealing to the GTC regarding the correction of academic deficiencies are final. Decisions regarding recommendation for dismissal to the Graduate School may be appealed to the Dean of Graduate Studies.

- **Procedure for leave reporting**
  Policies for vacation and leave for NSP students are the same as for other students at CU Anschutz. These are outlined on the Resources page of the Graduate School website under the Policies tab.
  - Students are allowed up to 14 calendar days per year and are also given all University holidays.
  - Once students have joined a lab, they should discuss vacation time with their thesis advisors.
  - Students are required to utilize the Graduate School Leave Reporting System.

- **AI Policy:** Guidelines for the Use of AI and Machine Learning Tools in NSP Courses
  The recent emergence of freely accessible Artificial Intelligence (AI) platforms that use large language models and other generative algorithms necessitates new guidelines to ensure that students understand when and when not to use these tools. Their benefits include enhancing scientific writing, accelerating the writing process, and reducing barriers to non-native English speakers. Major potential drawbacks also exist, however, including the potential for false or inaccurate information, breaches of confidentiality, plagiarism, and depriving students the critical tasks of working through problem sets that reinforce core didactic material. Thus, improper use of AI tools has the potential to undermine the learning objectives of the program.

This policy establishes a simple set of guidelines for acceptable and unacceptable use of AI language model tools in NSP courses. Our goal is to promote acceptable use of new technology while maintaining our overall goals and standards for training. Failure to follow these guidelines may result in course failure. Any questions regarding this policy and its implementation should be directed to the Course Directors and/or Program Directors.

Please note that these guidelines are minimum expectations and in cases where guidance is stricter, these policies are superseded by any specific guidelines provided by Course Directors (i.e. you must attend to any guidance provided by Course Directors and instructors for those relevant courses); Principle Investigators (as a member of a laboratory group, you must respect the wishes of use by your PI); or any other guiding entity (e.g. thesis committees).

Generally acceptable use

If you use AI tools for these purposes, you must be transparent about their use. Citation of any use should be included in the bibliography of your written assignments: include the name of the specific tool (and version) and how it was used. Ex: ChatGPT, v4 was used to evaluate the grammar in this proposal. Suggestions from this evaluation were included in the final draft.

1. Language and grammar checks. Except for course exams (see below), AI tools can be used to check or edit your original text drafts for grammatical errors. This provides an opportunity for you to learn rules and best grammatical practices.
2. Coding help. AI tools can help translate code between computer languages, explain code structures and principles, and teach you to code as a tutor might. These methods can be problematic if too many errors creep in, but in general, you may find it helpful to design your own tutorials driven by your own questions and curiosity that AI tools can help with.

Generally unacceptable use

1. Answering test questions for courses. Exams in NSP courses are intended to challenge you to think and translate your thoughts into original answers that are then evaluated by the course directors. During course exams, AI tools cannot be used at all, even to make suggestions to improve grammar and clarity in your writing.
2. Deriving answers and generating new text for homework and writing assignments for courses. While AI tools can be used to evaluate the grammar of your own original written content, and make suggestions to improve grammar and clarity, they cannot be used to generate new content for homework assignments. Also, verbatim use of sentences generated by AI tools will be considered plagiarism.
3. Identifying topics/potential experiments and generating new text for comprehensive exam proposals. These exams are intended to evaluate your ability to identify important scientific problems and experiments that address them, as well as to translate this knowledge into a written grant proposal. While AI tools can be used to evaluate the grammar of your own, original written content, and make suggestions to improve grammar and clarity, they cannot be used to generate new written content in comprehensive exam proposals. Verbatim use of sentences generated by AI tools will be considered plagiarism. In general, you should be able to defend every sentence you write with knowledgeable discourse.
4. Drafting peer review summaries. You may not use AI tools to generate summaries or reviews of your classmates' work. Peer review is an excellent opportunity to sharpen your critical thinking and evaluate alternative ideas on a topic and provides a unique opportunity for

practicing concise written communication. Use this opportunity to consider the proposal from your peer and provide your own perspective. Using AI tools to generate summaries or reviews denies you this opportunity and denies your peer from gaining your perspective. Furthermore, uploading content from another individual's proposal to an AI tool may violate confidentiality, as the uploaded content may be disseminated or used for other purposes and without your consent. NIH has recognized this threat and recently adopted a policy that prohibits the use of generative AI technologies for the peer review process.

In general, you should follow the principles outlined below as you navigate the use of AI in your graduate work: Developed collaboratively with Campus Health Sciences Faculty Committee.

We, as members of the AMC Community, strive to be innovative and curious in our approach to the use of new technology. Especially, given our commitment to improving health and biomedical research, we are responsible to approach the use of these tools with integrity and professionalism.

1. Never enter identifiable patient data/information into third party tools.
2. If using tools to assist with clinical decision-making, ensure these are approved by the health system and based on the best available evidence.
3. Familiarize yourself with the pitfalls of various tools such as bias, hallucinations, and incorrect information. In particular, for our PhD students, all should be aware of the tendency for LLM chatbots to fabricate fake citations and other information.
4. Be vigilant about the presence of biases in work generated by AI/ML; strive to mitigate the dissemination of these biases.
5. Avoid use of AI/ML to replace successful, evidence-based study strategies given concern these tools may negatively impact learning. For example, work through problem sets on your own or with classmates rather than leaning on AI tools. The goal in a PhD program is for you to learn, not to check boxes.
6. Critically evaluate any AI/ML generated responses with knowledge from course work and other resources.
7. Be honest and transparent about the use of AI and ML tools in curricular work such as studying and assignments. Citation of use should include name of the specific tool (and version) used and how it was used (e.g. editing the first draft for grammar; syntax help in Python code). Ex: ChatGPT, v4 was used to edit my first draft for clarity and brevity.
8. Failure to cite the use of outside tools may be considered plagiarism and will be addressed in the same way other academic professionalism lapses would be.
9. 9. Approach new technology and tools with curiosity but always maintain intellectual integrity.
   v.1 2024, sources CSD guidelines, Campus Guidelines, NSP directors

- **Neuroscience Program Promotion**
  All student publications, including abstracts, journal articles, and theses, should acknowledge the Neuroscience Program along with other University acknowledgments. Students supported by the Neuroscience training grant should acknowledge the grant number in all publications.

Office of Research Education

Policies can be found on the Office of Research Education website under Resources -> Policies.

- Conflict of Interest

- Honor Code and Committee Procedures
- Anschutz Email address communication
- Student Badge Requirement: Students must have their university badge visible, on their person, at all times while on campus.
- Financial Aid for Graduate Students
- Tuition, fees and stipend
    - All incoming Graduate Students are offered a financial aid package from the Graduate School that includes an annual stipend of **$41,912** (approved for **Academic Year 2025-2026**), tuition costs, and payment of individual student health insurance and activity fees. The Stipend is evaluated on an annual basis for the cost of living. Please note that this support covers the period July 1, through June 30 for continuing PhD students, and August 15, through June 30 for first year PhD students. Payment of annual stipend, along with tuition costs, fees and individual health insurance is dependent upon satisfactory academic progress as defined in the Graduate School and Program policies.

Program Events and Activities

Program Seminar

- The Neuroscience Program Seminar Series is on Tuesdays from 12:00-1:00pm. The seminar series consists of student thesis update talks, faculty membership talks, and invited guest speaker talks.
- Attendance is required for 1st year students as they receive a grade and credit through NRSC 7662. Students in 2nd year and beyond are required to attend 50% of seminars.
- Post-Comps students are required to give a yearly thesis update talk during seminar. This update should be 20-25 minutes.
- 1st year students are also required to attend 2 lunches for invited guest speakers, which immediately follow seminar.

Annual Retreat

NSP holds a retreat during the academic year that includes lectures, poster sessions, workshops, and opportunities for informal discussions during meals and free time. The event provides an opportunity for faculty members to present research being conducted in their labs, and for students to present posters and talks describing their own research. Each retreat also includes a Keynote Speaker, who is invited from another institution to give a lecture and participate in other retreat activities. For the workshops, the themes vary from year to year. Recent themes have included community building, mental health, and alternative science careers.

- The **2025 NSP Retreat is October 9th-10th** at the YMCA of the Rockies Estes Park
- Attendance at the retreat is required for all NSP students. Students should contact the Program Administrator and Program Directors if they are concerned about their ability to attend the retreat. Reasons for required attendance include:
    - The Retreat is the single most important event in the year that exposes students to the variety of neuroscience research being conducted at CU Anschutz.
    - The event provides a comfortable, informal venue in which to present your research and discuss science with faculty, post-doc, and student colleagues. This can be great practice for presentations at national conferences later in the year.
    - It helps build community and a culture of connection.
    - It provides an unusual opportunity to have extensive interactions with a top neuroscientist (the Keynote Speaker) from another institution.
    - Participation in Retreat workshops provides training in areas not covered by coursework,

e.g., in community building or science careers.

- NSP covers the cost of meals and lodging during the retreat. There will be 2 students assigned per room and requests for single rooms will be granted based on availability. Students will be required to pay the difference for a single room.
- NSP students are also expected to present their work, in either posters or short talks.

Student Activities

- **Neuroscience Journal Club**:
  - Tuesday mornings prior to seminar every other week during the academic year.
  - All first and second year NSP students are required to attend for NRSC 7663 credit.
  - Student Journal Clubs provide training opportunities in several key areas, including:
    - Continued broad exposure to neuroscience
    - Critical thinking and evaluation of scientific literature
    - Informal scientific discussions
    - Community-building with fellow students
    - Experimental rigor and reproducibility

- **Monthly Program Lunches:**
  - Typically, on the last Friday of the month, 12:00-1:00pm
  - These lunches are not required but highly encouraged.
  - Programming varies, from mental health check-ins to social events, to visits from alumni to learn about different career paths.

Training Grant

The Neuroscience Program's Training Grant supports 6 students (a combination of 1st and 2nd years) in the program each year. The program has a competitive selection process for 1st and 2nd year slots.

Eligibility: All students admitted directly into NSP as first-year students, except for students in the Thesis-lab track, may be eligible for appointment into second year slots. Also eligible are BSP and MSTP students entering NSP. Students who were appointed to the T32 as first-year students may apply for the second-year slots. The appointments in Years 1 and 2 are independent of each other. An appointee must be a citizen or a noncitizen national of the United States or have been lawfully admitted for permanent residence by the time of award.

Recruitment

Around February of each year, prospective student applicants visit our program for interviews. It is in the Program's best interest to attract and retain the best of these prospective students. To do this we need the help of current students and the Neuroscience faculty who can convince these individuals that our Program is the place to be! When asked, please be willing to spend some time with prospective students during dinners or other functions. NSP can flourish with your help.

Resources and Support

Students can access a variety of campus services through the links provided below. The Office of Student Affairs is committed to supporting CU Anschutz students by offering guidance and assistance in navigating campus resources. For detailed information about available services or to schedule an appointment, please visit the Office of Student Affairs webpages. For additional questions or support, you may contact the office via email at StudentAffairs@cuanschutz.edu.

- Office of Student Affairs

  - Campus Life
  - Student Support
  - Health & Wellness
  - Student Resources
  - Student Services
- Students Resource Directory
  - Includes all campus resources
- Academic Calendar
- Residency
- Badging Office
- Student Parking & Transportation
  - Eco Pass
  - Campus Circulator (Transportation service)
  - Medical Campus Rail Shuttle
- Office of Information Technology
- Student Health Insurance
- Office of Research Education – Concern Reporting Form (Maxient)
- CU Anschutz Student Outreach and Support Referral
- CU Anschutz Student Request for Medical Leave of Absence
- Graduation Deadlines Thesis, Anschutz
- Thesis & Dissertation/ProQuest Format & Guidelines

Appendices

Appendix 1: MSTP and BSP Additional Requirements

Medical Scientist Training Program (MSTP)

- Prior to the Comprehensive Exam, students who join the Neuroscience Program through MSTP must take at least 2 credits of didact neuroscience-related courses. The 2 credits can be obtained by taking any combination of the following Neuroscience Program courses:
  - NRSC 7501: Introduction to Neuroscience (1 credit, fall semester)
  - NRSC 7615: Developmental Neurobiology (3 credits, fall semester)
  - NRSC 7600: Cellular and Molecular Neurobiology (3 credits, spring semester)
  - NRSC 7670: Advanced Topics in Neuroscience (1 credit, varies)
- Since MSTP students will have taken a substantial neuroscience course as a first-year medical student, which significantly overlaps with the NRSC 7610 Fundamentals of Neurobiology course, MSTP students cannot take the NRSC 7610 course to fulfill the 2-credit requirement.
- Courses taken to fulfill the 2-credit requirement cannot also be used to fulfill the 1 credit Quantitative Requirement expect of all NSP students.
- MSTP students must fulfill all NSP requirements from year 2 and beyond. Courses required in year 2 cannot be used to fulfill the 2-credit requirement.

Medical Scientist Training Program
HANDBOOK

Biomedical Sciences Program (BSP)

- Prior to the Comprehensive Exam, students who join the Neuroscience Program through BSP must take at least 5 credits of didact neuroscience-related courses. The 5 credits can be obtained by taking any combination of the following Neuroscience Program courses:

  - NRSC 7501: Introduction to Neuroscience (1 credit, fall semester)
  - NRSC 7615: Developmental Neurobiology (3 credits, fall semester)
  - NRSC 7600: Cellular and Molecular Neurobiology (3 credits, spring semester)
  - NRSC 7610: Fundamentals of Neurobiology (3 credits, spring semester)
  - NRSC 7670: Advanced Topics in Neuroscience (1 credit, varies)
- BSP students may also partially fulfill the 5-credit pre-Comps requirement by taking a neuroscience-related course offered by another program (e.g., PHCL 7606 Receptors and Cell Signaling). Students should consult with the NSP Program Directors if they are interested in using a non-NSP course in this manner. BSP students should choose which courses to take based on what they plan for their thesis research and gaps in prior studies. Students should consult with their thesis advisors to determine which courses are most suitable for their thesis research.
- Courses taken to fulfill the 5-credit requirement cannot also be used to fulfill the 1 credit Quantitative Requirement expect of all NSP students.
- BSP students must fulfill all NSP requirements from year 2 and beyond. Courses required in year 2 cannot be used to fulfill the 5-credit requirement.

Biomedical Sciences PhD Program
HANDBOOK

Appendix 2: Rotations and Rotation Seminars

- **Choice of Mentor/Laboratory.** First and foremost, students should choose laboratories and projects that are reasonable possibilities for a student's thesis work. Students should avoid rotations whose main goal is the acquisition of new techniques; there will be plenty of opportunities to learn methods informally among the Program laboratories as the need arises. They should talk to their GTC mentors prior to making rotation decisions. Students should be aware that mentors and their groups put considerable effort into supervision of rotating students. Thus, some faculty may be reluctant to take on a rotation student if they have extensive travel plans, teaching, grant writing, or if their funding is in jeopardy. For these reasons, it is important that students arrange for rotations as far in advance as possible.

- **Rotation Periods:** Each rotation is ~12 weeks in duration. The second and third lab rotation periods include the winter and spring breaks. Students should discuss specific expectations with their rotation advisors for effort during these breaks. The winter break in particular is quite long, running from mid-December to late January (according to the Graduate School calendar), and students should expect to be working in the lab during most of this period. Students should always discuss time off with their lab mentors in advance. If you need a **Fourth Rotation,** you must request approval from your Program Director. The Program Administrator and Program Director will work with the Office of Research Education accordingly.

- **Rotation Grades:** Final grades for rotations will be based on the evaluation of the lab rotation advisor. These reports are sent to the student, the Program Directors for NSP, and Program Administrator. It is also very important that students meet with their rotation advisors after their rotation talks to discuss strengths and weaknesses in performance during the rotation and suggestions for improvement.

  The rotation talks will also be independently evaluated by the GTC. These evaluations from the GTC do not factor in the grading of the rotation but should be considered seriously by the students as they move forward. Students will be expected to show improvement in identified weaknesses

in subsequent rotations and seminars. Failing a rotation (B minus or below) will be considered a serious academic deficiency that may require further action by the GTC (see Academic Standards).

- **Rotation Seminar:** Students should consider the following elements when designing their talk:
  - Introduction: a short statement of the question or problem addressed by the rotation.
  - Background: describe the significance of the question in broad terms for a diverse audience. Describe previous work and its relationship to the project.
  - Specific aims: what were the experimental goals proposed to address the hypothesis?
  - Methods and Design: explain any unusual strategies or techniques employed. Results and
  - Conclusions: the results should be presented in a straightforward and logical manner. Conclusions should be summarized briefly.
  - Future direction: at the end of the talk, the student should provide a brief summary of results and how, in the students' opinion, they should be followed upon.

  Several other specific suggestions for effective talks include:
  1. Students should remember that they are addressing a general neuroscience audience and avoid the use of specialty-specific terminologies and jargon.
  2. Avoid reading or memorizing your presentation, if at all possible. Wooden, canned deliveries are dull and very hard for audiences to follow.
  3. Prepare and use simple, effective visual aids. Remember that effective communication of data and ideas is your goal! Keep text very brief and do not read directly from the screen (audiences are much faster at reading silently!).
  4. Both faculty and students are encouraged to ask questions after rotation seminars. A few of these questions may be intended to probe your understanding of your research rather than illuminate an area of confusion. Consider audience questions carefully. Make sure that you understand the question before answering. Repeat the question or ask for a rephrasing if you need to. Take a moment to formulate a coherent answer. If, after contemplation you don't know the answer, don't be afraid to say so. We all get stumped from time to time!

- **Expectations for Effort:** While first year students have a substantial course load, the program expects that sufficient time will be devoted to the rotation project. For professionals in training, it is not appropriate to require a minimum number of hours for rotation work. Strong self-motivation is an essential characteristic for an independent scientist, and we expect our students to demonstrate this quality throughout their training. In this regard, students should expect to be in the lab beyond the normal working hours from time to time, i.e., in the evenings and on weekends. This commitment of time is especially important when long, complex experiments are being done. A major part of the mentor's rotational assessment (as well as his/her willingness to accept a student) will be based on the degree and quality of lab effort.

Appendix 3: Preliminary Exam Rubrics

The preliminary exam will be a 2-part exam with the first part being written and the second part oral. The written component will be a journal club-style presentation of a paper selected by the faculty from the broad areas of cellular, systems, and developmental neuroscience. The oral exam will be partly based on the paper and will also range broadly across the three broad areas.

The NSP examination committee will consist of six faculty members representing the three core courses of the Neuroscience Program. Each student will be evaluated by a subcommittee of three faculty.

Written component: The students will be assigned a paper as a target article. The task then is for the student to provide a conceptual framework, putting the results from the paper into a broader context. The format shall generally follow that of *J Neuroscience* journal club articles. Specifically:

- Journal Club articles should have three components: a short overview of the background of the reviewed papers, a critical data-based review of the key findings, and a summary of the significance of the paper. The Journal Club must offer more than a summary of what was stated in the original articles. For example, it might provide a more in-depth explanation of a new technique used in the paper, important caveats or interpretations that the author did not mention, or a distinct interpretation of the results in the context of work that the author did not discuss. The Journal Club should focus on the most important results – there is rarely reason to discuss every figure. The Journal Club may also briefly discuss important questions raised by the paper to be addressed in future studies. The assigned paper will be relevant at some level to all three core neuroscience courses (Cellular and Molecular, Systems, and Developmental Neuroscience). Students are encouraged in their reviews to touch on each of these areas.
- Journal Club submissions must be concise. The length is limited to about 1500 words. References are limited to approximately 12.
- Journal Club articles should be written in a style that is understandable to all readers of The *Journal of Neuroscience*. Avoid using jargon and unnecessary abbreviations.
- Titles should be informative; the Journal discourages word play.
- A single, original schematic or explanatory figure is acceptable but not required. Do not duplicate figures that were in the reviewed papers.
- LLM usage is strictly forbidden! Submissions flagged for plagiarism and/or LLM text will get a FAILING score.

Oral Examination Component: Each oral exam will be ~30-40 minutes long.

The oral exam includes questions closely related to the research article on which the reviews are written but may diverge widely from that focus to range into broad areas of developmental, systems, or cellular neuroscience (i.e. material covered in the courses). Students are expected to speak cogently in response to the questions, but they should freely admit when a question falls outside of their realm of knowledge.

Students should prepare for the exam by themselves. They should not discuss the exam with any other students or personnel (e.g., faculty members).

During the oral exam, students will not be allowed to access their own reference materials, including the research article on which they write their reviews. As needed, faculty on the exam committees will provide a copy of the research article, so that figures etc. may be referenced. Students may bring into the room a bag/backpack that includes personal items, papers, computers, etc., but they may not use these items during the exam.

The oral and written parts of the exam are each graded Pass/Pass with conditions/Fail, according to the rubrics provided. If necessary, conditions that must be met to pass the preliminary exam will be determined by the exam committee and program directors and communicated to the student within 1 week after completion of the oral exam. Once communicated, the student will have 2 weeks to meet the conditions. In some cases, re-examination may be required. The remediation assignment will be reviewed by the appropriate exam committee member to make a determination to assign a pass or fail. Students that receive a failing score or who do not satisfy conditions laid out by the committee will be dismissed from the program.

Written Portion

1. WRITING

SCORE	DESCRIPTION
1	The writing is not clear and requires major edits.
2	Writing is not always clear and could use more careful editing, but is ok
3	Mostly well written, with clear, grammatically correct language, but with some room for improvement
4	Well written, with clear, grammatically correct language.

2. OVERVIEW

SCORE	DESCRIPTION
1	Does not clearly communicate the broader context in the overview section
2	Does not clearly communicate the broader context in the overview section, but makes some key points.
3	Communicates broader context in the overview section but may miss key points.
4	Successfully communicates the broader context in the overview section.

3. KEY FINDINGS

SCORE	DESCRIPTION
1	Fail to identify key findings.
2	Identifies some key findings, but the significance of the findings is not always clear.
3	Successfully identifies all key findings, but not their significance.
4	Successfully identifies all key findings and the significance of the findings.

4. CONTEXT

SCORE	DESCRIPTION
1	Fail to put the findings in a broader context.
2	Provides insight into one or more aspects of the paper (i.e., new methods, caveats, interpretations not provided by authors) but lacks depth.
3	High-level discussion at times gets distracted too much by miniscule details without contextualization.
4	Provides in-depth insight into one or more aspects of the paper (i.e. new methods, caveats, interpretations not provided by authors).

5. DISCUSSION

SCORE	DESCRIPTION
1	There is no high-level discussion of results.
2	Little high-level discussion of results.
3	Strong discussion of one topic (i.e. Dev, C&M, Systems)
4	Multiple interdisciplinary levels are discussed (i.e. Dev, C&M, Systems)

Preliminary Exam: Oral Portion

Each student will be assessed on a scale from 1 to 4 (1 = Emerging, 2 = Developing, 3 = Proficient, 4 = Mastery) on each of the three areas of neuroscience listed below (Development, Cell and Molecular, and Systems Neuroscience).

The rubric is designed to evaluate content knowledge, clarity of explanation, integration of examples, and conceptual understanding. The descriptions provide examples of what may be covered in the oral exam.

Each area of neuroscience will be graded separately.
Subscores of 3-4 in each area = **PASS**
Subscores of 1-2 in any area= **PASS WITH CONDITIONS**
Subscores of 1 in 2 or more areas = **FAIL**

DEVELOPMENT GRADING RUBRIC

1. GENERATION OF NEURONAL SUBTYPES FROM PROGENITORS

SCORE	DESCRIPTION
1	Limited or incorrect understanding of how neural progenitors generate different neuron types. Few or no key processes mentioned.
2	Some understanding of neuronal subtype development; mentions basic concepts such as timing or gradients but lacks detail or depth.
3	Correctly describes several mechanisms (e.g., transcription factors, spatial/temporal cues) and their role in generating diverse neuronal subtypes.
4	Provides a comprehensive and well-integrated explanation with accurate use of terminology and clear examples of developmental and cellular processes.

2. EMERGENCE AND ROLE OF E/I BALANCE IN DEVELOPMENT AND DISORDERS

SCORE	DESCRIPTION
1	Shows minimal awareness of E/I balance and its relevance to neurodevelopment. No clear links to disorders.
2	Understands basic idea of excitatory vs. inhibitory neurons but lacks detail on timing, development, or disease relevance.
3	Explains how E/I balance develops, mentions disorders like ASD with some mechanistic detail.
4	Thorough explanation of E/I development (e.g., synapse pruning, GABA switch), with detailed examples of how imbalance relates to disorders such as autism.

3. MECHANISMS OF AXOGENESIS AND AXON GUIDANCE

SCORE	DESCRIPTION
1	Vague or incorrect description of axon growth. Key mechanisms missing.
2	Names at least one guidance mechanism but lacks integration or specificity.
3	Correctly explains multiple mechanisms (e.g., guidance receptors, diffusible cues) with examples.
4	Comprehensive and integrated explanation of how adhesion, surface receptors, and gradients guide axon pathfinding. Well-supported by examples.

4. MYELIN, ACTION POTENTIALS, AND PLASTICITY

SCORE	DESCRIPTION
1	Incorrect or vague description of myelin's function. No discussion of plasticity.
2	Understands basic role of myelin in speeding conduction but omits developmental

	aspects.
3	Accurately describes myelin's impact on APs and mentions the role of plasticity in circuit formation.
4	Thorough understanding of conduction, saltatory transmission, and activity-dependent myelin plasticity. Integrates how plasticity shapes circuits.

5. SYNAPTOGENESIS AND MOLECULAR COMPONENTS

SCORE	DESCRIPTION
1	Minimal knowledge of synaptogenesis. Key molecular players not mentioned.
2	Identifies at least one contributor (e.g., adhesion molecules) but lacks explanation.
3	Explains how adhesion molecules, ECM, and cytoskeletal elements coordinate synapse formation.
4	Provides detailed, integrated explanation of synaptogenesis involving extracellular and intracellular players, with accurate terminology and examples.

Subscore: 1 2 3 4

CELL AND MOLECULAR NEUROSCIENCE GRADING RUBRIC

1. IONIC BASIS OF THE ACTION POTENTIAL

SCORE	DESCRIPTION
1	Vague or inaccurate understanding of ion movements during the action potential. Omits key channels or phases.
2	Identifies main ions (Na^+ and K^+) and general phases (depolarization, repolarization) but lacks clarity or mechanistic depth.
3	Describes the roles of voltage-gated Na^+ and K^+ channels in shaping the AP, including sequence and ion flow.
4	Thorough and accurate explanation of resting potential, threshold, depolarization, repolarization, and afterhyperpolarization. Includes role of ion gradients and conductance changes.

2. GATING OF VOLTAGE-GATED SODIUM CHANNELS

SCORE	DESCRIPTION
1	Little or no understanding of gating mechanisms; confused or inaccurate terminology.
2	Recognizes activation and inactivation but lacks mechanistic explanation or timeline.
3	Describes voltage-dependent activation and fast inactivation gating, including temporal sequence.
4	Provides detailed account of channel structure-function relationship, including voltage-sensor domains, conformational changes, and recovery from inactivation.

3. GI/O GPCR-MEDIATED INHIBITION OF CALCIUM CHANNELS

SCORE	DESCRIPTION
1	Limited understanding of GPCR signaling or its effect on calcium channels.
2	Understands that Gi/o inhibits calcium entry but lacks specifics.

3	Explains that activated Gi/o subunits inhibit presynaptic calcium channels and reduce transmitter release.
4	Clearly explains how Gβγ subunits bind to and inhibit voltage-gated Ca^{2+} channels, including implications for synaptic transmission and presynaptic modulation.

4. PAIRED PULSE DEPRESSION AND RELEASE PROBABILITY

SCORE	DESCRIPTION
1	Little knowledge of synaptic depression or its relevance to release mechanisms.
2	Understands that paired-pulse protocols affect synaptic strength, but explanation lacks detail.
3	Correctly describes paired-pulse depression and its use to infer high release probability due to vesicle depletion.
4	Detailed explanation of short-term synaptic plasticity, vesicle pool depletion, and how varying interstimulus intervals can reveal properties of synaptic release.

5. POSTSYNAPTIC MECHANISMS OF LONG-TERM POTENTIATION (LTP)

SCORE	DESCRIPTION
1	Minimal understanding of LTP or incorrect concepts.
2	Recognizes LTP occurs postsynaptically but lacks explanation of molecular mechanisms.
3	Describes NMDA receptor activation, calcium influx, and AMPA receptor insertion.
4	Provides a comprehensive explanation including NMDA and AMPA receptor dynamics, intracellular Ca^{2+} signaling, kinase activation (e.g., CaMKII), and synaptic strengthening.

Subscore: 1 2 3 4

SYSTEMS NEUROSCIENCE GRADING RUBRIC

1. SOMATOSENSORY AND PAIN SYSTEMS (SPINAL CORD, PAIN, TOUCH)

SCORE	DESCRIPTION
1	Fragmented or inaccurate understanding of pathways.
2	Recognizes basic pathways and sensory modalities.
3	Describes circuit organization and ascending sensory pathways.
4	Integrates somatosensory and pain processing with perception and modulation.

2. SENSORY SYSTEMS (VISION, AUDITORY, VESTIBULAR, OLFACTION, TASTE, PAIN)

SCORE	DESCRIPTION
1	Misunderstands modality-specific pathways.
2	Identifies organs and general signal flows.
3	Describes pathways and coding strategies for each modality.
4	Integrates circuit mechanisms with perception and behavior.

3. MOTOR AND INTEGRATIVE SYSTEMS (SPINAL CORD, EYE MOVEMENTS, CEREBELLUM, BASAL GANGLIA)

SCORE	DESCRIPTION
1	Limited understanding of motor control or reflex pathways.

2	Identifies basic functions or anatomy.
3	Describes circuit components and roles in movement.
4	Integrates motor planning, execution, and learning.

4. COGNITIVE AND AFFECTIVE SYSTEMS (LIMBIC SYSTEM, HIPPOCAMPUS, THALAMOCORTICAL CIRCUITS)

SCORE	DESCRIPTION
1	Minimal knowledge of function or anatomy.
2	Lists major structures or roles.
3	Describes connectivity and behavioral roles.
4	Explains circuit logic and relation to emotion, memory, or attention.

5. MODERN SYSTEMS NEUROSCIENCE METHODS (CALCIUM IMAGING, ANIMAL POSE ESTIMATION)

SCORE	DESCRIPTION
1	Lacks clarity on technique or applications.
2	Describes general use in neuroscience.
3	Explains signal processing, analysis, or behavioral tracking.
4	Integrates method principles with experimental design and limitations.

Subscore: 1 2 3 4

Appendix 4: Comprehensive Exam Rubric

PURPOSE OF THE SCORING RUBRIC:

This scoring rubric is intended to help standardize the comprehensive exam process. Its purpose is to improve transparency, calibrate expectations, and to ensure that NSP students are treated equitably. Comprehensive exams are customized for each student, making the exam process inherently subjective and difficult to standardize. Nonetheless, this scoring rubric provides a framework for evaluating the student in the most objective fashion possible given the complexities of the exam. It is meant to have some flexibility.

COMPREHENSIVE EXAM GOALS:

1. The exam process is intended to help students advance their scientific and communication skills. Think journey rather than destination.
2. The exam process is meant to help students focus their thesis work, increase their knowledge of neuroscience topics, and improve their productivity in the lab. The exam is not meant to be adversarial or punitive.
3. Another goal of the exam is to prepare students for future scenarios that require public speaking and “chalk talk” style defense of their data and ideas.

COMPREHENSIVE EXAM GUIDELINES:

1. The written exam follows the formatting guidelines of a F31 NRSA application.
2. The public seminar should be 30-40 minutes with questions.
3. The exam should be completed by the end of the student’s third year in the program.
4. Examiners will be provided with the student’s preliminary exam results to determine training progression. Examiners should ask questions that evaluate the criteria present in the four-area scoring rubric (below). The exam chairperson is responsible for keeping the questioning focused.

5. Examiners should consider the stage of the student when scoring. A “4” is a strong performance score for the level, not a perfect one.
6. A passing exam will have scores of 3 or 4 in each area. The exam score in each area is based on the collective consensus opinion of the examining committee. Thus, only one report will be generated with a single score in each area.
7. A score of 1 or 2 in any area requires remediation. This does not indicate a failed exam. Instead, additional conditions need to be met to satisfy the exam requirements. This involves completing a remediation plan (below). The intent of remediation is to improve the student’s skills and knowledge. It is not meant to be punitive.
8. Remediation plans will be given to the student in writing. Remediation plans should be focused, completable in approximately 8 weeks, and be designed to specifically improve the area(s) of deficiency. A revised rubric will then be completed to reflect the outcome of the remediation.
9. If remediation is unsuccessful, the exam is then considered a “fail”.
10. This rubric, including the scores and comments, will be uploaded to the student’s permanent record by the exam chairperson. In the case of remediation, the remediation plan and both the original and revised rubrics will be uploaded to the record.
11. The mentor acts as an observer during the exam. They do not provide or determine scoring. The mentor is permitted to answer questions from the examining committee about the student’s aptitude and performance in the lab.

SCORING RUBRIC:
This rubric contains examples of exam performance and should not be viewed as a strict checklist.

	KNOWLEDGE AND SCHOLARSHIP Identifies background, existing information, and reasoning.	**score:**
4	• Strong evidence of synthesis of concepts to support the thesis topic. • Terms, concepts, principles and methods are correct and described in depth. • Clearly identifies research problem in the field, based on prior knowledge. • Critiques prior work on the problem. • Demonstrates command of literature relevant to the thesis topic. • Information presented is appropriately cited. • Demonstrates independence in reasoning and understanding of the topic.	**comments:**
3	• Evidence of synthesis of concepts to support the thesis topic. • Terms, concepts, principles and methods are mostly correct and described with sufficient depth. • Identifies research problem in the field, based on prior knowledge. • Some critique of prior work on the problem. • Demonstrates familiarity with the literature relevant to the thesis topic. • Most information presented is appropriately cited. • Shows some independence in reasoning and understanding of the topic.	

2	• Some evidence of synthesis of concepts to support the thesis topic. • Terms, concepts, principles and methods are mostly correct but lack important details. • Description of prior knowledge is minimal. • Describes, but does not critique prior work on the problem. • Demonstrates familiarity with the literature relevant to the thesis topic, but some relevant literature or preliminary data are neglected. • The information presented is cited but could be improved. • Shows little independence in reasoning and understanding of the topic.	
1	• Little to no evidence of synthesis of concepts to support the thesis topic. • Descriptions of terms, concepts, principles and methods are insufficient and/or incorrect. • Insufficient description of prior knowledge. • Insufficient description of prior work on the problem. • Insufficient incorporation of literature relevant to the thesis topic. • Information presented is rarely cited/attributed. • Lacks independence in reasoning and understanding of the topic.	
	SCIENTIFIC REASONING AND EXPERIMENTAL DESIGN Written or oral description of hypotheses and experiments designed to test it.	**score:**
4	• Hypothesis is clearly stated, along with compelling rationale. • Compelling rationale for experimental approach is provided. • Experiments are clearly described, powered, and appropriate. • Clearly describes controls and how they impact interpretation of the results. • Alternative experimental approaches are clearly described. • Clearly describes how experiments and results test the hypothesis. • Identifies weaknesses in interpretation. • Alternative results are described, and impact on the hypothesis is considered. • Statistics, rigor, reproducibility and sex as a biological variable are deeply considered and suitable to the thesis project.	**comments:**
3	• Hypothesis is stated and rationale is provided. • Rationale for experimental approach is provided. • Description of experiments is mostly clear, powered, and appropriate. • Controls and their interpretation are described. • Alternative experimental approaches are described. • Describes how experiments and results test the hypothesis. • Alternative results are described and connected to the hypothesis. • Statistics, rigor, reproducibility and sex as a biological variable are sufficiently addressed and suitable to the thesis project.	
2	• Hypothesis is stated, but rationale is weak and could be improved. • Rationale for experimental approach is provided but is unclear or weak. • Description of experiments lacks some important details or is underpowered. • Controls are described, but description of interpretation is weak. • Alternative experimental approaches are described but not developed. • Description of how experiments and results test the hypothesis lacks depth. • Alternative results are described, but not clearly connected to the hypothesis.	

	• Statistics, rigor, reproducibility and sex as a biological variable are incompletely addressed.	
1	• The hypothesis is unclear and rationale is weak. • Insufficient rationale for experimental approach. • Description of experiments is unclear or inappropriate. • Controls are poorly described. • Alternative experimental approaches are insufficiently described. • Insufficient description of how experiments and results test the hypothesis. • Alternative results are insufficiently described. • Statistics, rigor, reproducibility and sex as a biological variable are not addressed.	
	WRITTEN COMMUNICATION Communicates knowledge and reasoning through writing and graphics.	**score:**
4	• Writing is clear and effective. • Graphics are well-organized and effective. • Terms, concepts, principles and methods are used correctly. • Writing takes full advantage of the student's preliminary data, experience, and/or supporting literature. • Citations are organized, appropriate, and of sufficient depth.	**comments:**
3	• Writing is mostly clear and effective. • Most aspects of graphics are well-organized and effective. • Most terms, concepts, principles and methods are used correctly. • Writing partially takes advantage of the student's preliminary data, experience, and/or the supporting literature. • Citations are organized, but sometimes inappropriate or of limited depth.	
2	• Some aspects of writing are clear and effective. • Some aspects of graphics are effective or the graphics are incomplete. • Some terms, concepts, principles and methods are used correctly. • Writing poorly reflects the student's preliminary data, their experience, and/or the supporting literature. • Citations are poorly organized, inappropriate, or of insufficient depth.	
1	• Writing is unclear and ineffective. • Graphics are disorganized or lacking. • Terms, concepts, principles and methods are lacking and/or incorrect. • Writing does not utilize the student's preliminary data, their experience, and/or the literature. • Citations are unorganized, used inappropriately, or lacking.	
	ORAL COMMUNICATION Communicates scientific knowledge and reasoning through speech and visual displays.	**score:**
4	• Oral communication is exceptionally clear and effective. • Graphics are well-organized and effective. • The public seminar is highly effective, engaging, and on-time. • Response to questions (public and with the committee) consistently incorporates appropriate evidence and reasoning.	**comments:**

	• Response to questions is reflective and shows independent thinking.	
3	• Most of oral communication is clear and effective. • Most graphics are well-organized and effective. • The public seminar is effective, but could be improved for clarity, engagement, or time. • Response to questions (public and with the committee) often incorporates appropriate evidence and reasoning. • Response to questions is correct after substantial prompting or "leading".	
2	• Some aspects of the oral communication are clear and effective. • Some aspects of the graphics are effective or the graphics are incomplete. • The public seminar is somewhat effective, lacks logical flow, or is inappropriately brief or long. • Response to questions frequently incorrect, even after substantial prompting or "leading".	
1	• Oral communication is unclear and ineffective. • The public seminar is ineffective. • Graphics are disorganized or lacking. • Routinely fails to answer questions correctly or coherently.	

Appendix 5: Thesis Committee Meetings

- **Frequency and Duration of Thesis Committee Meetings**
  - Thesis Committee meetings should occur once every six months and last 12 hours. It is recommended that students schedule at least 1 ½ hours. When possible, students should coordinate their annual thesis update talk with their committee meetings.
  - As a student approaches the completion of his/her thesis research, it may be appropriate to have more frequent meetings.
  - The student and student's advisor are primarily responsible for ensuring that the meetings occur at the appropriate time.

- **Requirements for Thesis Committee Meetings**
  - **Written Progress Report:** Written progress reports can be useful tools for structuring your committee meetings. Students should send the committee members a brief progress report ~1 week before your committee meeting. The goals of the progress report are to update your committee on your progress and accomplishments, identify any needs or concerns, and identify goals for the future. Below is a suggested format for your progress report. If an IDP was recently completed or updated, it may be useful to also share that document with the committee.

    Student Name:
    Month/Year of comps:
    Meeting date:
    Last meeting date:
    Committee members:

Thesis mentor:
Title of project:
Summary of progress since the last meeting:
Thesis project (including what efforts to ensure rigor in experimental design and analysis):
Supporting projects/collaborations/pending publications:
Manuscripts:
Meetings, abstracts and form of presentation (poster/talk):
Date of last IDP:
Fellowships/ Grants:
RCR training:
Professional Development:
Potential timeline for the upcoming year and graduation:

- **Review of progress with student/mentor out of the room:**
  - Thesis Committee meetings should begin with the student and thesis mentor each providing a brief update of progress with the other party out of the room. This mechanism is intended in part to allow students and faculty to talk openly about mentee/mentor relations. This portion of the meeting can take 10-20 minutes, depending on whether there are any issues raised by the student or mentor.
  - If the committee includes a spouse of the thesis advisor, it is recommended that the spouse should accompany the thesis advisor when he/she leaves the room. This should facilitate a more open discussion.
  - If there are issues between the mentor and mentee that will be raised, it is sometimes helpful to discuss with the committee chair prior to the meeting so appropriate time is dedicated to this portion of the meeting.

- **Oral Presentations at Thesis Committee Meetings**
  - At the meeting itself, students provide their committee with a semi-formal presentation of their research progress. These presentations typically last 30-45 minutes, depending on whether the meeting is aligned with an update talk that committee members were able to attend.
  - Students should explain the background, rationale, and results of their research project. Some of the research described may be work in progress, and students should also use committee meetings to discuss technical problems that they have encountered. Hence, parts of the committee meeting presentation may be more informal.
  - Students should also update committee members on their progress in the development of professional skills and in career development.
  - Students should provide the committee with goals for research and training activities for the following 6 months. There should be a brief discussion of how to integrate feedback and guidance from the committee into these plans.

- **Evaluation of student progress at Thesis Committee meetings:**
  - Thesis Committee meetings are primarily designed as a mechanism for students to get feedback on their science from experts. The committee conveys this information both during the meeting as well as after the meeting through the thesis committee report. The

new thesis committee report form is in progress and will be published as soon as it is available. Until then, committees should continue to use the report in GAIA.

- Following guidance from NIH, NSP has two new areas of emphasis in the evaluation of students at Thesis Committee meetings.
  - The first is in statistical and quantitative methods and scientific rigor. The goal is to have concepts that students have been taught in their coursework in these areas reinforced and integrated into their later years of training.
  - A second area of emphasis is on professional and career development. While numerous mechanisms exist that can in principle help train students in professional and career development, NSP would like Thesis Committees to be more involved in ensuring that students are adequately trained.

Appendix 6: Direct Admit (Thesis-Lab Track)

- **Definition:**
  Students in the Thesis Lab-track agree to join a specific laboratory of an NSP training faculty before admission and forgo laboratory rotations in their first year.

- **Thesis Lab-Track Requirements:**
  Thesis Lab-Track students will matriculate with other incoming first-year graduate students in the fall semester, with the same requirements for orientation and other pre-start activities. Thesis Lab-track students must enroll in all first-year courses, and they will be expected to present "post-rotation" talks at the end of each rotation period describing research progress. The faculty sponsor will also be required to complete an evaluation and provide a grade for the student's lab work at the end of each rotation period.

  Like all first-year graduate students, Thesis Lab-track students will be assigned a faculty advisor from NSP's Graduate Training Committee (GTC). Such an independent voice will be especially valuable if issues arise between the sponsor and the student. The GTC advisor will also assist the Thesis Lab-track student in preparation of "post-rotation" talks and, also, serve as a resource to help the student navigate through first-year coursework.

  Students in the Thesis Lab-track are encouraged to apply for fellowship support as appropriate. Thesis Lab-track students will not be eligible for first- or second-year slots on NSP's JSPTPN T32 (per NIH guidance); however, as far as NSP leadership is aware, they should be eligible for other types of fellowship support (e.g., NRSA). The student and sponsor should investigate these potential fellowship mechanisms and determine eligibility.

  Thesis Lab-track students must adhere to all other Program rules and requirements. Specifically, they will be required to successfully complete the same coursework, examinations, and laboratory research requirements as other students in the Program. Students not meeting these requirements will be subject to dismissal from the Program.

- **Thesis Lab-Track Requirements:**
  <u>A pledge to the following financial risk mitigation with Thesis Lab-track students will be required of all sponsor faculty prior to student matriculation:</u> If a conflict arises within the first year of training that results in the student needing to leave the host laboratory, the sponsor will be financially required to cover up to two additional rotations. If a conflict arises after the first year but before the Comprehensive exam, the sponsor is required to cover one additional rotation.

Following the Comprehensive exam, changing labs will be dealt with on a case-by-case basis. An exception to this policy will be granted if the student has failed to remain in acceptable academic standing.

Appendix 7: Individual Development Plan

- The Neuroscience Program uses the Individual Development Plan templates provided by Standford. Other formats may be used, but should address stage-appropriate research and professional development training needs and goals that are aligned with the career(s) of interest that the student will pursue. Templates can be found here: https://oge.stanford.edu/academics/idp/forms/

Appendix 8: Faculty Information/Resources

- Faculty information/resources
  - Quick Reference table for membership
- Summary of the responsibilities of the Thesis Committee chair
  - After each Thesis Committee meeting, the Chair should e-mail the thesis advisor feedback about mentorship issues that came up during the meeting. If no issues come up, the Chair should e-mail the thesis advisor with a note indicating such.
  - At the Thesis Defense, the Committee Chair will be responsible for securing the student's academic file from the Program Administrator.
  - Throughout a student's dissertation period, the Committee Chair will serve as the primary conduit of information between the students and committee members.
- Role of Thesis Committee in the final stages of a student's dissertation work
  - As a student approaches the end of his/her thesis work, the Thesis Committee plays an especially critical role. It is the job of the Thesis Committee to determine whether a student's research meets the standards for a PhD.
  - Obviously, it is important that a student be in active discussions about completing the thesis with their thesis committee significantly before, perhaps as much as a year prior to, when the student expects to complete their thesis. In the final stages, students should expect to receive explicit guidance from the thesis committee about their expectations for the student in thesis committee meeting(s) and associated report(s).