

Comprehensive Exam Guidelines

Ph.D. Graduate Students

Purpose

The Graduate Program for Biochemistry and Neuroscience (B&N) is a statewide graduate program administered through the Department of Chemistry and Biochemistry with faculty and students from UAF, UAA, and UAS. The format for the PhD comprehensive exam outlines a consistent procedure across all campuses (UAF, UAA, UAS) with the intent to increase both the quality and stringency of the examination process. The format of the PhD comprehensive exam also generates a tool to assess the B&N core courses and prerequisites, which will ultimately benefit our student's education. The goal of the B&N core courses is to provide an understanding of biochemistry and neuroscience, which will benefit the student's research and future career.

Timeline

Register for the PhD Comprehensive Exam by completing the registration form in this packet and sending it to kdrew@alaska.edu. Follow up with additional e-mail or phone messages if you do not get a reply acknowledging receipt of the registration form. Students take the PhD comprehensive exam after the second year of entering the program or once the B&N core course requirements are fulfilled. The core requirements for each individual student are determined by the student's committee with the goal to provide the academic education most pertinent to the benefit of the student's thesis research field. You will be contacted after completing your second year and will be asked to provide a timeline for taking your exam.

The written examination (proposal) must be submitted by 5:00 pm August 10th or by 5:00 pm February 10. If the due date falls on a Saturday or Sunday the proposal will be due the Monday following the stated due date. The proposal should be emailed to Kelly Drew at kdrew@alaska.edu by the due date and time. The date and time for the oral examination is determined by the student in consultation with the student's graduate committee and should be held no later than four months after submitting the written proposal. The student should contact the graduate school to arrange for an outside examiner as soon as a date is set for the oral exam.

Format of ExamWritten

The written portion of the exam consists of writing a research proposal. The proposal can be your thesis proposal, but it must be your own work. For example, it would not be appropriate to copy from a funded proposal written by your PI, even if a lot of your experiments are from that proposal. Research proposals must contain the following sections

1. Specific Aims (no longer than one page)
2. Research Strategy (at least five single-spaced pages and no more than six single-spaced pages (not including references).
3. Biosketch formatted according to the instructions required for the type of proposal. NIH and NSF have specific biosketch instructions.
4. Description of Facilities where the work will be done
5. Vertebrate Animal or Human Subjects section (if appropriate). The Vertebrate Animal and Human Subsections should conform to current NIH requirements.

We encourage students to use the format of an NIH RO3 or R21 proposal. A rubric, included in this packet, details how the proposal will be evaluated. Students should pay attention to the rubric when writing the proposal.

If a student wishes to use another format, the format must be pre-approved by the student's graduate committee. The written proposal must be submitted to the graduate advisory committee four weeks prior to the oral defense of the proposal. The oral defense constitutes the Oral Comprehensive Exam and requires that the student request an outside examiner at least 3 weeks prior to the oral exam.

Oral

The oral portion of the comprehensive exam consists of formally presenting the proposed research to the graduate committee and defending the research plan. Students will prepare a set of slides. On one slide, in one to three sentences describe the overall research goal(s). In additional slides illustrate and defend the significance, innovation, approach, expected results and interpretation of the proposed research. Be prepared to answer questions that challenge the strength of the scientific premise, strategies to ensure a robust and unbiased approach and general knowledge of the field. Also be prepared to discuss unexpected results and interpretation of these results.

Outcome

All committee members complete the Comprehensive Exam Review form and return it to kdrew@alaska.edu. Once all of the forms are received the forms will be forwarded to the chair. The chair distributes the forms to the student and to the committee. The committee evaluates the student's performance and will determine an overall score based on the student's performance in the written and oral examination and establish the final grade *pass/fail*.

The purpose of the comprehensive exam is to insure that the student is prepared to succeed with his/her proposed research plan and career objectives. Outcome of the comprehensive examination will thus be used to guide the direction of future studies. It is the responsibility of the major advisor to submit the "Report of Examination" to the Graduate School, with copies to the Dean and Department, and the student within 15 days of the examination (oral). Poor performance on the comprehensive examination will result in a conditional pass or failed exam. A conditional pass will result in probationary status. Students who fail the comprehensive exam may retake the exam one time as recommended by the graduate committee. Two failures will result in termination from the program although this is rare. Students with probationary status will receive clear guidelines of expectations to be met within one semester and the student's committee determines the successful completion of expectations.