

2012 Chemical Biology Preliminary Qualifying Exam (PQE) Guidelines

The aim of the PQE is to assess the student's ability to review research in a particular field, to identify a problem or formulate a central hypothesis that is significant for the field, to design line(s) of experimentation to address the problem or test the hypothesis, and to describe how s/he will interpret the data that would result from the proposed experiment. The topic for the proposal may be related to a student's dissertation research or the topic may be completely independent.

Students may take the exam in the fall term (by the end of October) or in the spring term (by April 15th) of their second year. It is advised that the student completes the teaching requirement in the semester without the PQE.

A PQE Committee must be composed of three faculty members. Each student will be assigned a Chemical Biology Executive Committee Member to chair the PQE committee. The student will provide a one page outline of a possible topic to the chair and Program Coordinator as well as propose two additional faculty members to sit on the PQE committee. Once the chair of the committee has met with the student and approved the topic and other faculty members, the student should contact the Chemical Biology Coordinator to assist in scheduling the exam.

It is anticipated that there will be discussions between the student and the Dissertation Advisor on the thesis topic but the PI should not be involved in the writing of the proposal or preparing for the oral exam. The student must not solicit direct input on the written proposal from any faculty member. All of the writing must be the student's own original work. Students are encouraged to actively seek advice and feedback from students and post-docs on all aspects including formulation and writing of the proposal as well as preparation for the oral exam.

A one page specific aims write-up should be submitted to the committee three weeks prior to the exam date. The goal is to allow the students to receive feedback on how broad/narrow, etc their topic is. This is especially useful to those who will be writing a Proposal on their anticipated thesis research.

The final written proposal should be submitted to the student's Committee and the Chemical Biology Coordinator at least one week prior to the oral defense. The Advisor should not be included in that submission. The overall length not including figures and references should not normally exceed ten pages.

The format for the proposal is as follows:

- Background and Significance
- Specific Aims
- Preliminary Results
- Future Plans

The student should be prepared to present a short (20 min) presentation of the proposal. Either during or following the presentation, faculty members will ask questions regarding the proposed research. The questions may also probe the student's general knowledge beyond the specifics on the proposal. The oral exam is expected to last no longer than 2 hours.

The Dissertation Advisor will not be present during the exam but will give a private oral or written introduction about the student prior to the start of the exam. Following the exam, the Dissertation Advisor will be invited to speak briefly with the committee without the student being present.

The committee, student and Dissertation Advisor will then discuss their evaluation. The evaluation will take into consideration both the written and the oral parts of the exam. The faculty will consider whether or not the student successfully justified the proposed research, the significance of the research, the degree of independent thinking that went into the proposal, the clarity of the writing, and the student's breadth of knowledge relevant to the proposed research.

The three possible outcomes of the exam are:

- The student will pass the exam. A pass means there are no significant weaknesses in proposal, oral exam, or general knowledge.
- Conditional Pass. This means any serious shortcomings, rewrites, lack of background knowledge. The student will be asked to rewrite or represent their proposal. There will be a deadline and set of instructions given to student at end of exam. At the re-examination the student can either pass and begin their proposed research, or fail and be asked to leave the program.
- Fail, in which case the student will be excused from the program.

The chair of the exam committee is responsible for submitting a written report of the recommendations made by the PQE committee to the Chemical Biology Program Office.