

Second Year Proposition Exam Committee Meeting Guidelines

Information and Instructions:

The goal of the annual committee meeting is for students to receive substantive and actionable feedback from committee members on student progress toward doctoral program goals and milestones. The committee should be viewed as a resource to help the student navigate the path to graduation. These annual meetings are especially important if research progress is slow or if there are concerns about the academic performance of the student. Similarly, these committee meetings are an important opportunity for the student to seek guidance regarding mentorship concerns with the thesis advisor. The Biological Sciences PhD program expects faculty serving on thesis committees to take this instructional responsibility seriously and to actively participate in thesis committee meetings. These annual meetings should be 1.5 hours in length to provide time for active discussion and feedback and should take place in-person. The committee chair and evaluation head should budget *at least* 10 minutes of discussion time at the end of the meeting, without the student present, to carefully complete the online Biological Sciences Advancement to Candidacy evaluation form .

The completed form will provide useful written feedback to the student and the PhD program. The PhD program expects faculty who serve on PhD thesis committees to provide substantive and thoughtful feedback as part of their instructional obligations.

Committee Composition:

Three members (four if jointly advised). Refer to the graduate [handbook](#) on committee composition requirements. The chair of the committee is the Thesis Advisor (or co-chairs if jointly advised by two faculty members). Further, the student and advisor should select an Evaluation Head of the committee who will serve as the moderator for all committee meetings and complete the attached evaluation form. It is the student's responsibility to communicate the choice of Evaluation Head prior to the committee meeting.

The Second Year Proposition Exam will focus on the thesis research project and will include both a written report and an oral presentation.

The goals of the Second Year Proposition Exam are:

- To evaluate the student's knowledge of the field in which the student plans to carry out their research, including familiarity with relevant literature.
- To critically assess the research proposal, including specific aims and an outline of research approaches.

The Thesis Committee members will assess student's knowledge of their chosen area of thesis research as well as relevant background and general knowledge in the biological sciences. Students are expected to have developed appropriate communication skills to explain their research question(s) clearly and succinctly, in writing and verbally. Students should be able to demonstrate to the committee the ability to:

- Clearly communicate the rationale for the chosen research question(s)
- Define critical gaps in the current knowledge of their chosen research field
- Develop original and creative approaches to their research question
- Think critically about their planned research strategy
- Propose a research plan that is feasible within the timetable of a PhD thesis
- Anticipate potential difficulties and propose alternative approaches
- Define successful research outcomes
- Demonstrate a plan to ensure rigor and reproducibility within the research plan

The Core Thesis committee will assess the student's progress in developing intellectual independence from their Thesis Advisor, the student's autonomy in the research project, and that student and thesis advisor are aligned regarding the scope and the general direction of planned work.

Written second year thesis proposition guidelines:

The student must submit a written thesis proposal to all committee members (electronically) **one week prior to the committee meeting.**

Format: The format of the written portion of the exam will follow that of an NIH NRSA individual pre-doctoral (F31) fellowship proposal. As such, students and advisors can use this as a basis for submitting a proposal to the NIH. The proposal should follow the page limits applicable to an NIH grant proposal and include the following sections:

- Specific Aims (1 page)
- Research Strategy (6 pages, including Figures):
 - Significance
 - Preliminary Studies
 - Approach
 - Potential problems and Alternative Approaches
 - Plans for Ensuring Rigor & Reproducibility
- Timeline for achieving research milestones
- Literature Cited (including titles, all authors; not counted in the page limit)

Oral presentation guidelines:

The student should present the research background, significance, research strategies, and preliminary data using a similar structure as the written report. The student should prepare meeting materials that, when presented uninterrupted, do not exceed 45 minutes in length. Emphasis should be placed on clearly communicating the rationale for the chosen research question and research approaches.

The student can be asked to leave the room prior to the commencement of the oral presentation. During this time, the committee will have a discussion with the Thesis Advisor to evaluate overall student progress, research strengths and weaknesses, and any concerns. The Thesis Advisor will similarly be asked to leave the room to allow time for the student to discuss any issues regarding the Thesis Advisor with committee members. If the student articulates substantial concerns regarding the Thesis Advisor that cannot be adequately addressed in the context of the committee meeting, the Evaluation Head should contact the Chair or Vice Chair of the Graduate Committee to discuss the issues and establish an action plan.

Following the student's presentation, the student may again be asked to leave the room while the committee discusses the quality of the student's oral and written presentation. Once the student rejoins the meeting, the Evaluation Head will summarize the discussion and provide feedback to the student based on the attached evaluation form. Other committee members are encouraged to provide feedback as well.

The evaluation head will complete the evaluation form and submit it for program review. The student should be afforded the opportunity to ask any questions regarding committee feedback. One potential outcome may be that the student does not pass the second-year proposition exam and the student will be placed on program probation. Program probation would require the committee to collaborate with the student to establish a detailed progress improvement plan with well-defined goals and timelines for the student to repeat the Proposition Exam. The committee will establish an appropriate timeline. The probationary process requires scheduling a future committee meeting no more than 12 months from the date of the current committee meeting.

This outcome should not be viewed as detrimental to the student's progress. Everyone (including all committee members) has written proposals that were judged to be inadequate, and which required revision and resubmission. This is a typical process in professional

research science and provides an important educational opportunity. The committee should weigh this decision carefully, but also not shy away from asking the student for a revised proposal.

Second Year Proposition Exam Report

Student:

Year of student matriculation in doctoral program:

Thesis Advisor:

Evaluation Head:

Other Committee Members:

Date of Committee Meeting:

Evaluation Scale:

1 - Outstanding: Exceeds expectations with some minor issues or flaws

2 - Satisfactory: Met or above expectations with some notable but not concerning issues or flaws

3 - Requires Attention: Did not meet expectations with major issues or flaws.

1) Did the student submit their written thesis proposal to the committee at least one week prior to the committee meeting?

Yes No

2) The quality of the written thesis proposal was:

Outstanding (1), Satisfactory (2), Requires Attention (3)

3) The quality of the oral presentation was:

Outstanding (1), Satisfactory (2), Requires Attention (3)

4) The student's knowledge of the scientific literature relevant to the research project is: Outstanding (1), Satisfactory (2), Requires Attention (3)

5) The student's ability to critically evaluate and interpret their results is: Outstanding (1), Satisfactory (2), Requires Attention

(3)

6) The student's initiative and independence toward study design and project directions is: Outstanding (1), Satisfactory (2), Requires Attention (3)

7) Is the Committee in agreement with the student's research priorities and research timelines for the next 12 months as stated in the student's written report and oral presentation?

Yes No

If not, please explain briefly below:

8) Provide a summary on the committee's overall evaluation of student academic progress. What are the major research goals for the next year?

9) Please provide an action plan to address specific areas of training that need attention. If the committee feels that certain minimal goals must be achieved in order for the student to remain in good standing in the graduate program, please specify these here. The committee should revisit this action plan the following year to see if progress has been made.

10) Has the student passed the thesis proposition exam?

Yes No

If the committee decides the student does not pass the second-year proposition exam, the student will be placed on program probation. Program probation would require the committee to collaborate with the student to establish a detailed progress improvement plan with well-defined goals and timelines for the student to repeat the Proposition Exam. The committee will establish an appropriate timeline to complete defined milestones. The probationary process requires scheduling a future committee meeting no more than 12 months from the date of the current committee meeting.

Action Plan if needed:

Signed by Evaluation Head
Signed by Thesis Advisor
Signed by Student