

## Advancement to Candidacy Exam Committee Meeting Guidelines

The Biological Sciences PhD program requires students entering the program in FA24 or after to convene an advancement committee meeting by spring quarter of their third year in the program. It is recommended for students who entered the program in FA23 or earlier to convene an advancement committee meeting by spring quarter of their third year in the program. Advancement to candidacy is a university (campus-wide) requirement and must be completed prior to the prescribed pre-candidacy time limit. The goal of the Advancement to Candidacy exam committee meeting is for students to describe (1) a cohesive and well-reasoned thesis topic, (2) significant progress on that thesis topic, and (3) feasible plans for completion and publication of their thesis research. The thesis committee is expected to evaluate this progress and provide substantive and actionable feedback to the student. The committee should be viewed as a resource to help the student develop their thesis research and navigate the path to graduation. In addition, 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 by providing substantive and thoughtful feedback. These 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 attached report. The completed form will provide useful written feedback to the student and the PhD program.

### Committee composition

The advancement thesis committee will oversee the student's progress from the time of advancement to candidacy until the student's successful PhD thesis defense and graduation. Minimally, the advancement to candidacy committee will consist of four members (five 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 advancement committee meeting.

Once formulated, the student is required to communicate the committee composition to the Graduate Program Coordinator to ensure that the composition meets all requirements. The Graduate Program Coordinator should be contacted with any questions regarding committee composition. The committee composition is then routed to the Director of the BioSci PhD program and the Division of Graduate and Postdoctoral Affairs (GEPA) for approval. **The approval process must take place at least two weeks prior to the scheduled advancement committee meeting.**

### Goals and student expectations:

The Advancement to Candidacy Exam will focus on the progress and feasibility of the thesis research project and will include both a written report and an oral presentation.

The goals of the Advancement to Candidacy Exam are to evaluate the student's progress and research plans based on the following questions.

- Does the student have a deep working knowledge of the relevant background literature that forms the basis for the dissertation research project? Does the student know and clearly communicate the key previous results or studies that inform the proposed research question?
- Has the student appropriately provided sufficient justification and rationale for the chosen research approach? Has the student considered potential problems and provided alternative approaches to offset these risks?
- Is the student making sufficient overall research progress toward the goal of making an original contribution to the chosen research field (e.g. publishing a first author research paper) before the end of their 5<sup>th</sup> year in the graduate program?

The Thesis Committee members will assess student's knowledge and progress in 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) and progress clearly and succinctly, in writing and verbally. Students are expected to demonstrate to the committee the ability to:

- Clearly communicate the rationale for the chosen research question(s)
- Clearly articulate progress they have made on their thesis research.
- Think critically about their own data and data in the literature
- Explain how their research addresses critical gaps in the current literature
- Develop original and creative approaches to their remaining research questions
- Identify strengths and weaknesses in the techniques in their 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

A specific rubric assessing these expectations is found on the evaluation form below.

### **Written advancement meeting report guidelines.**

The student must submit a written advancement meeting report to all committee members (electronically) **one week prior to the advancement committee meeting**. Failure to submit this report by the stated deadline may result in a failure to advance to candidacy. It is highly recommended that the student sends early drafts of the written advancement meeting report to the thesis advisor to obtain constructive feedback prior to sending the advancement meeting report to thesis committee members. The evaluation head should be clearly indicated in the email containing the thesis proposition.

The written advancement meeting report should not exceed 10 pages (references excluded from this limit) and be comprised of the following sections.

Specific Aims Page – 1 page

Background and Significance – 1-2 pages

Progress report for each aim following these guidelines. 2-3 pages for each aim.

Aim X:

#### Rationale.

Briefly restate the significance of the research question for this aim. Why is the research question interesting? What key previous results in the lab or in the literature form the basis for the hypothesis or research approach?

#### Research approach.

Justify chosen research approaches. Why is this the best method/approach to answer this research question?

#### Research progress toward aim completion.

What has been done and what is the contribution of new knowledge to the chosen research field? Include figures as needed. If the aim has not been started, state the expected results.

#### Potential pitfalls that may limit, or are currently limiting, research progress.

What if the approach doesn't work or yield interpretable data? Have there been unexpected problems with the chosen research approach?

#### Alternative Approaches.

This section should contain a discussion of alternative approaches to overcome potential or ongoing research barriers.

Please also include a timeline for achieving research goals, including a timeline for publication(s) and graduation. Further, a slide that discusses future career plans should be included at the end of the presentation.

### **Oral advancement to candidacy presentation**

The student should present the research background, significance, and progress 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. Slides that lay out the research and graduation timelines should be included at the end of the presentation. Keep in mind the stated evaluation criteria listed above when constructing the written report and oral presentation. In particular, framing results in the context of an eventual publication, including potential title, abstract, figure layout, etc, is recommended. It is highly recommended that the student reviews the presentation with the Thesis Advisor prior to the advancement thesis committee meeting. It is also advisable that the student give a practice presentation to the entire research group if possible.

The student will 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 potential concerns.

The Thesis Advisor will similarly be asked to leave the room either at the beginning or end of the meeting 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 will again be asked to leave the room while the committee discusses the quality of the student's oral and written presentation and the overall

research progress using the rubric on the attached evaluation form. Once the student rejoins the meeting, the Evaluation Head will summarize the discussion and provide feedback to the student. Other committee members are encouraged to provide feedback as well and the student should be afforded the opportunity to ask questions regarding committee feedback. The Evaluation Head will then inform the student if they have passed or not passed the advancement to candidacy exam. Should the committee determine that the student has not successfully met the requirements for advancement to candidacy, a clear plan for future action will be communicated to the student. This outcome should not be viewed as detrimental to the student's progress. This plan could include setting a future date to repeat the advancement meeting to allow the student an opportunity to incorporate feedback from the committee and successfully advance to candidacy. If the student has reached or is nearing the pre-candidacy time limit, sufficient time to repeat the advancement meeting may not be available. In this case, a failure to advance to candidacy may result in termination from the doctoral graduate program.

**The evaluation head should budget at least 10 minutes of discussion time at the end of the meeting, after the student has left, to carefully complete the attached report with other members of the committee.** 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.

## Advancement to Candidacy Exam Evaluation Form

Student:

Year of student matriculation in doctoral program:

Thesis Advisor:

Evaluation Head:

Other Committee Members:

Date of Committee Meeting:

Evaluation Scale relative to expectations for 2<sup>nd</sup> year students:

1 - Outstanding: Exceeds expectations with some minor issues or flaws. This should be regarded as not a usual outcome and should be reserved for students judged to be in the top 10% of the indicated category.

2 – Meets expectations: Met expectations with some notable but not concerning issues or flaws. This should be regarded as the expected outcome for most students.

3 - Requires Attention: Did not meet expectations with substantial issues or flaws. This is not an uncommon outcome and should be viewed as an area of growth for student professional development.

4 – Problematic: Major flaws or issues noted. This outcome should be rare and reserved for students with substantial concerns regarding academic progress. Students receiving problematic evaluations should be considered for academic notice.

1) Did the student submit their written advancement meeting report at least one week prior to the committee meeting? Note that failure to submit the written proposal on time counts as a “Requires Attention” evaluation.

Yes No

2) The quality of the written annual committee meeting report was:

Outstanding (1), Meets expectations (2), Requires Attention (3), Problematic (4)

3) The quality of the oral presentation was:

Outstanding (1), Meets expectations (2), Requires Attention (3), Problematic (4)

4) The student’s knowledge of the scientific literature relevant to the research project is:

Outstanding (1), Meets expectations (2), Requires Attention (3), Problematic (4)

5) The student’s ability to critically evaluate and interpret both their own and previously published results is:

Outstanding (1), Meets expectations (2), Requires Attention (3), Problematic (4)

6) The student’s initiative and independence toward study design and project directions is:

Outstanding (1), Meets expectations (2), Requires Attention (3), Problematic (4)

7) Generation of a credible body of original research that would contribute to an eventual publication (e.g. figures of a paper):

Outstanding (1), Meets expectations (2), Requires Attention (3), Problematic (4)

8) The student's ability to describe their results in the context of current gaps in the literature is:

Outstanding (1), Meets expectations (2), Requires Attention (3), Problematic (4)

9) Feasibility of the proposed experiments and timeline to publication and graduation is:

Outstanding (1), Meets expectations (2), Requires Attention (3), Problematic (4)

10) Overall student progress since the previous committee meeting is:

Outstanding (1), Meets expectations (2), Requires Attention (3), Problematic (4)

11) 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:

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

13) Please provide an action plan to address specific areas of training that can be improved. This section should be completed for all students, even those that exceed expectations. 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.

14) Has the student passed the advancement to candidacy exam?

Yes No

If one or more answers to questions 2-10 are problematic, the student will not pass. If three or more answers to questions 1-10 are Requires Attention, the student will not pass.

Students that do not pass the advancement to candidacy exam will be placed on academic notice. The committee will provide a detailed plan with well-defined milestones and timelines for the student to repeat the advancement meeting to successfully advance to candidacy. The plan may also include scheduling a future committee meeting for the student to prepare and deliver another oral presentation to successfully pass the exam. The committee will determine the duration of the time the student is on academic notice and when the student will attempt to pass the advancement to candidacy exam. This timeframe can be up to one year and as short as 10 weeks as long as the student's pre-candidacy time limit (PCTL) is carefully considered.

Failure to pass the advancement to candidacy exam on the second attempt will result in program dismissal.

Signed by Evaluation Head

Signed by Thesis Advisor

Signed by Student