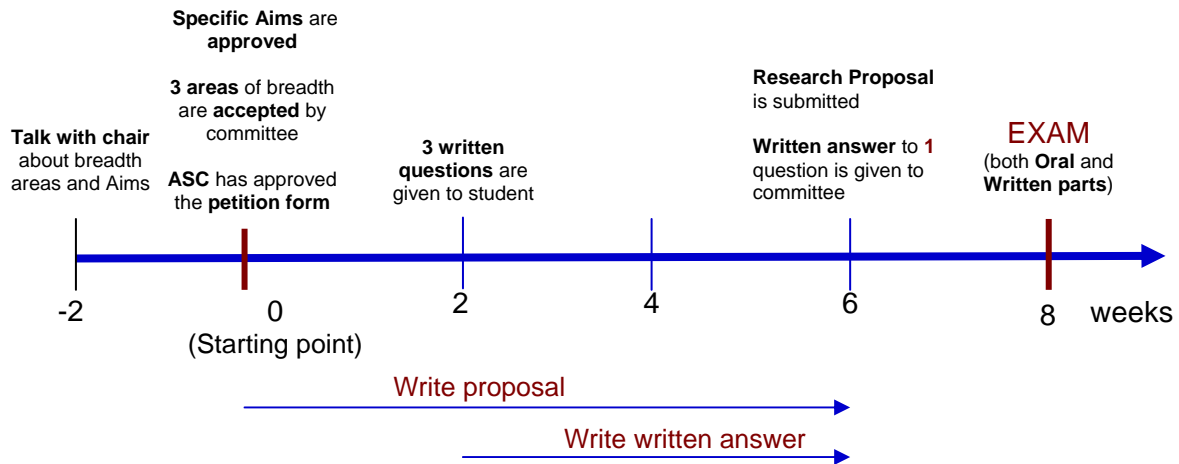


Steps in Taking the Cell and Regulatory Biology Program Ph.D. Candidacy Examination

Time outline for the Ph.D. Candidacy Examination (CRB Program)



(revised June 27, 2007)

- 1. Petition for Ph.D. candidacy.** As stated in the GSBS Policies and Procedures, "Students must petition for Ph.D. candidacy before the end of the first semester of the third year of admission to the (M.S.)Ph.D. program (before the end of the second year if the student previously has earned an M.S. degree or one year after an M.S. has been completed at GSBS)." Therefore, this step should be accomplished before or at the beginning of the student's seventh semester of registration in the (M.S.)/Ph.D. program. GSBS requires that the Candidacy Examination be completed by the end of the student's third year. Any request to depart from this schedule must be approved by the Cell and Regulatory Biology Program Director after consulting with the candidate's advisor.
- 2. Formation of Examining Committee.** This is done following GSBS guidelines. *The student's advisor is not permitted to serve on the Examining Committee.* As with other GSBS committees, at least one Examination Committee member's research interests must lie outside the student's major discipline. At least two of the members must not have served on the student's Advisory Committee.
- 3. First Submission of Material to the Examining Committee.** The student submits the following:
 - A. The Specific Aims page of a research proposal modeled after a standard NIH Individual NRSA application, as outlined in the GSBS Policies, Procedures, and Guidelines for Students. The complete proposal will be submitted later (see below).
 - B. A declaration of 3 areas of breadth of knowledge. Example areas include

serine/threonine kinases, pulmonary pharmacology, membrane excitability, regulation of gene expression, transport mechanisms, and cyclic nucleotides. Latitude will be given in the three areas, as long as they are reasonably general and distinct, and represent areas of importance to investigators of cell and regulatory biology. To ensure breadth, at least one of the areas declared must be clearly different from the specific area of research that is the focus of the research proposal. The Examination Committee will determine whether the proposal topic and areas of breadth are acceptable, and the Chair of the Examination Committee will inform the student of any necessary modifications. Following approval by the Examination Committee, the student will schedule the oral section of the Candidacy Examination to be held no later than 8 weeks later.

4. **Questions from Examining Committee.** Within 2 weeks after approving the proposal Specific Aims and areas of breadth of knowledge, the Examination Committee will give the student 3 questions, each on one of the areas of breadth.
5. **Written Answer to One Question.** The student has one month after receiving the 3 questions to prepare a written answer to one of the questions. Excluding references and diagrams, the answer will be up to 5 pages long (single spaced). The student must research and cite relevant scientific literature, including current references, and prepare the answer independently, without consulting others. Answers must be written in the student's own words; plagiarism is grounds for failing the exam (and may be treated by GSBS as academic dishonesty). The written answer will be given to each member of the examining committee at least two weeks before the scheduled exam.
6. **Research Proposal.** At least two weeks before the oral Candidacy Exam, the student will submit to all members of the Examination Committee their complete research proposal modeled after a standard NIH Individual NRSA application, following the guidelines stated in the GSBS Policies and Procedures. The student will also submit the proposal to their mentor, who will verify that the proposal was conceived and written independently by the student alone. The mentor may not suggest any revisions to the student. While preparing the proposal, the student may ask Committee members general questions about their expectations of the research proposal (and knowledge to be displayed in the oral examination) but may not give drafts of the proposal to the Committee for feedback during its preparation. However, the preparation of the proposal is considered a learning experience as well as an evaluative mechanism, so the student may show a preliminary outline of their proposal to one or more faculty members within the Program (but not to their mentor or members of the Examination Committee) for informed feedback on whether the planned proposal would have the form and content of a reasonable NRSA application.
7. **Oral Examination.** During the Oral Candidacy Exam, the Committee will ask general and specific questions about the written exam question, the other two areas of breadth, and the research proposal. If permitted by the Examination Committee, the student may make a brief (no longer than 20 minutes) formal presentation of their research proposal at the beginning of the oral examination. Instead of a single comprehensive oral examination, the Examination Committee may elect to schedule two separate oral examinations; one for the

research proposal and one for breadth of knowledge.

8. **Evaluation of Performance.** Upon completion of the oral examination, the Examination Committee will evaluate the performance of the student, using the instructions from the GSBS Policies, Procedures, and Guidelines for Students. Separate evaluations of the written and oral portions of the exam as well as a single overall result (Unconditional Pass, Conditional Pass, Re-Examination, or Fail) will be communicated to GSBS. The Examination Committee will provide the student with a detailed appraisal of their performance in each area and recommendations for improvement. To maximize feedback and guidance to the student, these detailed assessments will also be given to the student's advisor and Supervisory Committee (if the student passes). For Conditional Pass status, the exact nature of any deficiencies (whether they be in the written or oral portion of the examination) and suggested mechanisms and time-frame for correcting the deficiencies will be clearly stated. Re-examination may be oral or written, and can be focused on the proposal, the areas of breadth, or both, as stipulated by the Examination Committee. If the student fails the exam, the committee may extend an option to the student to pursue an M.S. degree, or may recommend that the student be dismissed from the (M.S.)/Ph.D. program.