

## **DBS guidelines regarding graduate student progress and the qualifying exam.**

I. All graduate students will turn in a Research Progress Report at the end of each semester. Two reports noting unsatisfactory progress will disqualify a student from continuing in the program. Failing to submit a report will be considered equivalent to unsatisfactory progress.

II. A minor change to the graduate curriculum was made to allow the use of an oral qualifying exam. The writing proficiency component of the curriculum was changed from a written exam to BIOL 600, which has a more structured and appropriate writing requirement.

III. All students will establish their advisory committee by the end of their first semester in the program. This committee will meet by the end of the student's first semester to (1) define the limits and expectations of the qualifying exam which will be completed at the end of the second semester, (2) provide guidance to the student on the project proposal developed in BIOL 600, (3) complete the student's program plan form, and (4) discuss the qualifying exam.

IV. The student's program plan should be evaluated after the qualifying exam is completed should remedial course work be necessary.

### **V. Exam structure**

- A. The general nature of the qualifying exam is to support and encourage the student's progress within their research emphasis.
- B. The exam will be administered orally during the last week (i.e., finals week) of the second semester of enrollment, on a date agreed upon by faculty. A panel of faculty, including but not limited to the student's advisor, the student's advisory committee members, and DBS graduate committee members, as available, will participate in exam administration.
- C. All students eligible will be tested the same day. Students will be assigned a 60 min time slot for their test at least two weeks in advance of the exam.
- D. A formal written research proposal describing the project is due to the graduate coordinator no later than 8:00 AM on Monday morning of the 13<sup>th</sup> week of class during the second semester of the exam (i.e., two weeks prior to the start of final exam week). The grad coordinator will circulate the proposal to faculty for review prior to the exam. Failing to meet this deadline will result in a "No Pass" for the exam (see below).
- E. Exceptions to this schedule due to extenuating circumstances must be approved by the DBS graduate committee.
- F. Students will begin the oral exam with a maximum 15 min introduction to their project without the use of presentation software. A chalkboard may optionally be used during the introduction. Students may optionally bring up to five slides of their own data to help explain their project. These slides should only contain data. Following the introduction, faculty are expected to ask questions to clarify or redirect the conversation during the exam, with the aim of assessing key learning objectives (see below).

VI. Guidelines in the form of learning objectives for the exam should include, but are not limited to, the following:

1) Demonstrate a clear general knowledge of the historical and current literature within their larger chosen field of study (i.e. ecology, cell and molecular biology, botany, microbiology etc.). This should include foundational material as well as current research and directions within the larger field. Students should be able to articulate the distinction between applied vs. basic scientific investigations in the field.

2) In the context of their particular project area, the student should have a basic knowledge of experimental design, methodology and techniques pertinent to their project. They should also demonstrate an understanding of hypothesis construction, including selection of appropriate controls and how each applies to the student's project.

3) Also in the context of their proposed project, the students should have a solid understanding of the relevant literature and general knowledge necessary to both complete their project and place their results in a larger context.

4) The student may summarize his/her progress on the project. This may include any combination of preliminary data, literature review, experimental design, plans for data analysis, interpretation of projected results, etc. The purpose is to encourage the integration of the preceding objectives with the confines of the student's project.

VII. The student's performance on each component of the qualifying exam will be rated by the committee and will be given one of three evaluative marks:

- **Excellent** – student demonstrates exceptional understanding and abilities (above and beyond the expectations of the committee).
- **Satisfactory** – the student demonstrates at least reasonable understanding and abilities, although there may remain room for improvement.
- **Unsatisfactory** – the student does not demonstrate adequate knowledge. The committee has serious concerns about the student's background knowledge or preparation necessary to successfully complete the project.

VIII. The faculty panel will evaluate each student's performance as "Pass" or "No Pass". Students evaluated as "No Pass" are required to retake the qualifying exam the following semester and may be asked to complete remedial classes or additional work beyond what is in the program plan. A second evaluation "No Pass" will mean the student is released from the graduate program (i.e., Academic Disqualification). Students who receive an evaluative mark of satisfactory may also be asked to complete some remedial classes or work before they are advanced to candidacy.

IX. A qualifying exam form (following) signed by the faculty panel and the student at the conclusion of the exam will be submitted to the graduate coordinator and included in the student's file. This form will serve as recognition of exam completion and list any necessary remediation to be completed by the student. Students will not be advanced to candidacy until documentation that remediation has been completed is submitted to graduate coordinator

**Qualifying Exam assessment and evaluation form.** At the conclusion of the exam the faculty panel will review the student's performance on the learning objectives and guidelines below. Learning objectives are to be scored as **Excellent, Satisfactory, or Unsatisfactory**. Any remedial activities required by the committee must be noted. The form, signed by the faculty panel and the student, is returned to the DBS graduate coordinator.

\_\_\_\_\_ Demonstrate a clear knowledge of the historical and current literature within the field. This can include recent progress and new directions of current research by prominent figures in the field. The nature of applied vs. basic scientific investigations in the field should be included when applicable.

\_\_\_\_\_ Demonstrate an understanding of hypothesis construction, including selection of appropriate controls. The nature of limiting assumptions and basic experimental design are two essential features of this process.

\_\_\_\_\_ Within a field the student should have a basic knowledge of biological assays and/or analytical tools pertinent to their project, and those commonly used in the field.

\_\_\_\_\_ If possible (and highly encouraged) is the presentation of preliminary data or other progress on the project. The committee should have modest expectations. The purpose is to encourage the integration of the preceding objectives within the confines of the student's project.

Pass \_\_\_\_\_ No Pass \_\_\_\_\_

Remediation (as necessary) and deadline:

Advisor \_\_\_\_\_

Student \_\_\_\_\_

Committee \_\_\_\_\_  
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