

## Environmental Chemistry Ph.D. Comprehensive Examinations Plan

Modified April 2014, June 2016 and March 2023

The timing of comprehensive examinations is decided in consultation with the advisory committee but is typically in the summer after completion of the second year (after 4<sup>th</sup> academic semester) in program. The student must have completed their core courses before attempting the written examination. The written comprehensive exam is a research proposal on the student's intended Ph.D. dissertation research. Additional details are outlined below.

### Written Comprehensive Details:

The dissertation proposal must be 6-12 pages of figures and single-spaced text. References are not counted in the page count total but must be provided in a section following the proposal. The proposal provides the plan for the Ph.D. dissertation and must include:

- A summary that states the broad significance and intellectual merits that is understandable by the public - consider the external examiner as the audience.
- A detailed explanation of the scientific problem.
- Review of literature that summarizes the current state of knowledge and identifies the gap in the chosen scientific area.
- Statement of broad goal and testable hypotheses or specific aims.
- Explanation of methods to be used and data to be acquired.
- Preliminary results.
- Planned activities with timeline and anticipated products.

The student must be the primary author of the dissertation proposal, with input or supervision from their principal advisor, as appropriate. Through this dissertation proposal, the student must demonstrate the ability to propose novel research that builds on current knowledge to address a significant question. The dissertation proposal must be handed to all committee members, who will have two weeks to grade (pass/fail) the dissertation proposal. The committee will give the student feedback similar to a grant review panel on their proposal, with the goal that a passing proposal is the equivalent of a proposal that would be recommended for funding.

### Oral Comprehensive Examination Details:

After a student has passed their written comprehensive examination, they should file the "Report on Comprehensive Examination" form with the graduate school. The written examination portion will be signed at this time. Only after that form is signed, may the student schedule for their oral comprehensive examination. The student sets up the oral examination place/date/time with

the committee and brings that information to the graduate school to request an external examiner. The student will prepare an ~40-minute presentation describing their topic, their successes to date, and their dissertation proposal. Following the student's presentation, the committee, external examiner and student will enter a closed session where the student is examined orally on their dissertation proposal and relevant core topics of the program. After the committee confers, the student will be given feedback and a "Report on Comprehensive Examination" form will be filed for the oral component.

#### Examination Failure Policy:

If a student completes their third year after program entry and has not either passed their comprehensive examinations (including both written dissertation proposal and orals) or submitted a manuscript for publication with their principal advisor, they will be automatically shifted out of the Ph.D. program. If a student has submitted a manuscript for publication with their principal advisor by their third year, they can remain in good standing with an extended timeframe of passing their comprehensive examinations by the end of their fourth year.

A student who does not pass the examinations will be given a second opportunity to take the examinations in the following semester (including summer). It is therefore recommended that students take the comprehensives at latest in their fifth academic semester. The consequence of failing the examinations on the second try is that the student will no longer be a candidate for the Ph.D. degree, although they may use their work to complete a different degree program.

Failure of either examination may also affect student funding.