

CEE HH PhD Qualifying Exam Format

This document provides guidelines for administering and taking the pre-doctoral Qualifying Exam for the Hydrology & Hydrodynamics sub-specialty in the Department of Civil and Environmental Engineering at the University of Washington.

1. Purpose

The purpose of the Qualifying Exam is to assess: 1) competence in core subject areas that underpin the student's intended research area, and 2) preparation to embark on a focused research project. The Ph.D. Qualifying Exam is a department requirement for doctoral students in order to continue on to the Ph.D. The exam is not a Graduate School requirement. The exam is not meant to intimidate or weed-out students, but rather to strengthen the fundamentals that will support students in their research.

2. Timing

The qualifying exam should be taken approximately one year (but no later than two years) after starting the PhD track if starting with a completed Masters degree, or within two years (but no later than three years) if starting from a BS. With consultation with the PhD advisor and exam committee, exceptions to this timeline may be granted for medically related issues (e.g., COVID-19, family leave, physical and mental health difficulties, etc.). However, it is in the PhD candidate's best interest to stay on this timeline as much as possible.

3. Eligibility

A cumulative graduate UW GPA of 3.0 is required to take the exam, this is a Department requirement for all research areas. A 3.0 GPA is also required by the UW Graduate School for completed PhDs.

4. Examination Committee

The qualifying exam committee should be formed at least one month before the exam and should consist of three area faculty who are members of the graduate faculty. In some cases, a fourth faculty with subject area expertise relevant to the PhD research topic may join from another area in CEE or even another department at UW. The chair of the qualifying exam committee should be the student's assigned advisor within CEE. *Thus, the exam committee is unique to each student, though some years the committee may be similar for multiple students (with a simple rotation of the chair).* The committee should consist of faculty who are either familiar with the student's research area, or who have taught the student in a course, such that they can develop exam questions with a reasonable expectation for the student's understanding of specific topics.

The duties of the qualifying exam committee are to: (1) develop the written exam questions (2) administer the written and oral exams; (3) determine the outcome of the exam and the readiness of the student to proceed with doctoral research; and, (4) provide recommendations to the PhD advisor and

student regarding coursework and review of fundamental research principles, literature, etc. The PhD advisor shall report the exam outcome to the Department Graduate Student Advisor.

5. Exam Format

The PhD advisor and student should work together to assemble an exam committee and schedule the qualifying exam at least one month in advance, often in concert with other students on a similar timeline. The HH Qualifying Exam will take approximately 1-week to complete, with two components:

Written component: each committee member will prepare written question(s) for the student, to be delivered by email on an agreed date and time. This part of the qualifying exam will last 2-4 days, as defined when scheduled, and will be open book/notes. The student will submit their written answers to all committee members via email by an agreed deadline (2-4 days).

Oral component: In the week following submission of the written exam (via email), the student will complete an oral exam. The first step of the oral exam will be a presentation/summary of the written answers (10-15 minutes per question). The next phase of the oral exam will be a Question & Answer discussion about any topics that pertain to the written exam, core principles and their application to the student's research area.

6. Exam Grading

Upon completion of the oral exam, the exam committee members shall immediately meet, discuss the student's exam performance (both written and oral) and decide the outcome of the qualifying exam. A dissenting minority opinion may be recorded, but the majority opinion shall govern.

7. Outcomes

There are three potential outcomes of the qualifying exam:

Pass. The committee determines the student has demonstrated satisfactory core competency and research skills. This result shall be reported to the Department Graduate Student Advisor and no further action is required of the board. A decision to pass will often include critical feedback recommendations for the student to strengthen understanding of specific fundamental topics. Such critical feedback is intended to help the student thrive in the research to come.

Retake. If the qualifying committee has determined the student has not demonstrated satisfactory core competency and this is the student's first attempt of the qualifying exam (i.e., not a retake), the qualifying exam committee will recommend a retake to be taken within two months of the completed oral portion of the exam. Only one retake is allowed for the student. The results of a retake may only be pass or fail.

Fail. The qualifying exam committee has determined the student has demonstrated unsatisfactory core competency and research skill on the retake exam. This result shall be reported to the Department Graduate Student Advisor, and no further action is required of the exam committee. A decision of fail on a retake will prevent the student from continuing to pursue a Ph.D.

In the case of a Pass or Retake outcome, if the exam reveals weakness in a specific area that is deemed important to the student's research or professional preparation the exam should result in a plan to address these through coursework or independent study.

8. Reexamination procedures

The retake exam will have the same format as the initial exam, with a new set of questions. If possible, the exam committee will be the same faculty members.

9. Notification and record keeping

After the examination, the qualifying exam committee shall notify the student of the exam decision. The chair of the qualifying exam committee will provide a written report of the examination including a summary of the recommendation and supporting arguments. A record of the decision shall be emailed to committee for concurrence and forwarded to the Graduate Student Advisor for retention in the student's permanent file.

10. Appeals and Grievances

Any challenge to the decision of the Qualifying Exam Committee should be taken directly to the Graduate Program Coordinator for Civil and Environmental Engineering. If a formal appeal is made, a new committee including the student's PhD advisor shall review the student's permanent file, qualifying exam, record of decision and interview the student and make a recommendation to either: (1) let the decision stand, or (2) retake the qualifying exam.