To all PhD students:

I am writing to inform you of an important change to the Department of Computer Science PhD degree qualifying examination [see attached document]. This change was approved on Thursday, April 19, 2012 and will implemented in the Fall 2012 Semester. The new qualifier exam design is the result of an internal assessment of how best to insure our doctoral students are prepared for success in completing their degree and success in their chosen careers. This review compared our current qualifying exam process with best practices of other leading doctoral programs in Computer Science. The new qualifying exam is designed to insure that our doctoral students gain and demonstrate 1) breadth of expertise within Computer Science, 2) deep subject matter expertise in a well-defined subset of the field, and 3) the ability to advance their chosen field through independent original research.

PhD students who matriculated prior to the Fall 2012 semester and have not completed the present qualifier [i.e., pre-qualifier students] are not required to switch to the New qualifier system but may do so if they wish. Of those who switch, if they have completed 3 or more semesters by the end of the Spring 2012 semester they must complete the new qualifier examination before the end of 1+ additional semesters (completion date: 31 March 2013). All other pre-qualifier students who switch must complete the new qualifier examination before the end of 3+ additional semesters (completion date: 31 March 2014).

All pre-qualifier students will have until 1 October 2012 to provide signed, written notification to the graduate office that they wish to switch to the new Fall 2012 qualifier examination. After this deadline all pre-qualifier students who did not notify the graduate office of a switch to the New Qualifier Examination will remain enrolled in the Old qualifier system that was in place prior to Fall 2012. We remind you that, consistent with its requirements, all pre-qualifier PhD students who decide to remain in the old qualifier system are required to pass the old qualifier within the first 3 semesters of entering the PhD program or be dismissed from the program.

I, along with the entire graduate committee and CS faculty, hope you share our enthusiasm for new qualifying exam process. Please talk with us if you have any questions at all. We encourage you to fully understand the benefits of the new qualifying exam and the significant advantages it offers to you in your academic and career development.

Sincerely,

Professor Kenyon

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The PhD Qualifier Examination.pdf

Content-Type: application/pdf
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The PhD Qualifier Examination

Effective for students entering PhD program for the Fall 2012 semester and beyond, all Doctoral students are required to pass The PhD Qualifier Examination [as described below] before the end of their 4th semester (31 March or 31 October). Current students who matriculated prior to the Fall 2012 semester may switch to this new qualifier examination. Of those who switch, if they have completed 3 or more semesters by the end of the Spring 2012 semester they must complete the new qualifier examination before the end of 1+ additional semesters (completion date: 31 March 2013). All other pre-qualifier students who switch must complete the new qualifier examination before the end of 3+ additional semesters (completion date: 31 March 2014).

The Qualifier Examination consists of 2 parts:

- A PhD Course Requirement which is designed to evaluate the student’s basic proficiency in core areas of computer science.
- A Written Critique and Presentation [WCP] which is the special area exam testing the candidate’s analytical and presentational abilities, and is taken in the 3rd or 4th semester.

In their 4th semester PhD students will be evaluated by the entire faculty to determine their standing in PhD program.

- A student must create a self-assessment document of 2 or more pages based on a template provided by the department. This will include evaluation of previous performance; plans for next year, research plan, publication plan, and deadlines for milestones in the completion of the degree, etc.
- The decision of the faculty that a student must leave the program is final and there is no petitioning of this decision.

PhD Course Requirements

Take 4 Classes or their Final Exam

- All Students must show competency in CS401 and 3 additional classes by either enrolling in the class or taking the in-class final exam.
- Any 400 or 500 level CS class that has an in-class comprehensive final exam with a comprehensive syllabus available at the beginning of the class is an eligible course.
- All classes must be passed with at least a “B” and at least two of the 4 classes must be passed with an “A”
The **Course Requirements** must be completed by the end of the students 3rd semester in the program.

**Written Critique and Presentation: Framework and Guidelines**

The purpose of the Written Critique and Presentation [WCP] is to demonstrate the candidate’s ability to analyze, evaluate, and present an existing body of research, normally (but not necessarily) in the area in which they intend to carry out their dissertation work.

The WCP should be passed in the student’s second year in the program. The WCP approval form is at LINK1; for the word version, LINK2.

The deliverables of the exam are:

1. Critical review - a significant (15-25 pages; ~7000words=20pages) piece of scholarly expository writing based on a coherent selection of 2-4 papers from the research literature in the chosen area.
2. Presentation - a 45-minute oral presentation, followed by questioning by a panel of 3 faculty.

The logistics are organized as follows:

1. The student identifies a topic and selects a WCP chair, who agrees to administer the exam. The student and the chair agree upon two other committee members and the chair picks two to four technical papers to be critiqued. A student’s advisor may be a member of the WCP Committee, but cannot be the WCP Chair. All members of the committee (including the chair) should be from CS. One committee member (not the chair) should be a non-specialist in the chosen topic.

2. A short written proposal (using a standard form – available online), naming the committee, describing the area, and listing the technical papers, is submitted to the CS DGS (via the Graduate Coordinator) for immediate consideration and approval (1 week maximum delay).

3. From the date of this approval, the student has exactly 60 days to prepare a critical review of the selected papers in the chosen area.

4. The faculty including the WCP committee members may answer specific questions about the selected work but should not assist in analyzing the content, the significance, or the accuracy of the selected work.

5. Copies of the finished critique should be delivered to each of the WCP committee members on or before the end of the 60 day period.
6. A date should be set for the formal Oral exam to be held within three weeks (but not less than one week) after the critique is to be handed in. (Given that at least three faculty schedules need to be coordinated, negotiations for the date of the oral exam should begin at least three weeks before the written critique is handed in!) Scheduling the oral exam is the student’s responsibility.

7. At the Oral Exam, the candidate is expected to present the content of the critique as though presenting a technical paper at a conference. Thus, visual aids etc. are expected to be used and the performance evaluation is to be based on technical sharpness, presentation style, command of the area, and effectiveness of visual aids. The presentation should be roughly 45 minutes in length. Note that while fluency in English is desirable, the most important criteria will relate to the candidate’s ability to ‘get the material across’ to their audience.

8. The presentation is open to the general public and is followed by a question and answer period (covering both the critique and the general area). The WCP committee may elect to continue with a closed question and answer period followed by a discussion.

9. As with all talks and oral examinations in the CS Department, WCP talk announcement - with abstract, committee members, room, time, etc. - should be posted by the graduate coordinator to the appropriate graduate and faculty email lists at least two weeks before the event.

10. The WCP is graded with a numerical score 1-5 with 1 being best performance, and a short evaluation of the student’s performance.

11. This exam cannot be repeated.

In cases where the WCP topic falls in the student’s main research area, there may be substantial overlap between the written critique and the Related Work section of the thesis proposal and/or thesis. This is fine.

A conference paper, master’s thesis, etc. cannot simply be submitted verbatim as a substitute for the WCP. However, parts of prior written work on which the student is the sole author may be re-used as the basis for part or all of a WCP paper. Details should be negotiated between the student and their WCP committee chair.

Sample WCP papers are at LINK3.