The PhD Comprehensive Exam is intended to test student’s ability to perform, present and discuss his/her research. The following is an overall guide to be used by students when preparing for the exam:

The student will prepare a written document describing his/her research proposal and defend it in the presence of the members of his/her PhD Comprehensive Committee. The proposal should give clear evidence of knowledge of the research topic, motivation and importance, and understanding of the research problem and related work. It should also include indication of the research methodology, expected results, and a (timeline) schedule up to completion of thesis writing and doctoral defense. Upon successfully passing the comprehensive exam, the student is officially admitted into (PhD) candidacy.

- The Comprehensive Exam (Thesis Proposal) should be held within a year or two of passing the qualifying Preliminary Exam (10 credits of dissertation hours is recommended).
- The Thesis Proposal must be submitted to the PhD Committee at least three weeks prior to the exam. This gives the committee sufficient time to carefully read the proposal and evaluate the ideas. Failure to submit the proposal on time may result in having to reschedule the exam.
- The Ph.D. committee membership must satisfy the CSE Department’s guidelines for PhD comprehensive exam requirements. An Application for Candidacy form and permission to take the exam from must be completed according to the Graduate School Rules at least two weeks prior to the exam.

**Guidelines on How to Write the Comprehensive Exam Report (Thesis Proposal)**

- A balance must be struck between satisfying severe space limitations and providing the most critical details. The proposal is not a binding agreement between the student and the Ph.D. committee on the precise tasks that must be accomplished. Through frequent interactions with Ph.D. committee members, the student can adapt the specific thesis accomplishments as necessary.
- The Thesis Proposal should be between 15 and 25 pages (when single-spaced format). Bibliographic references are not included in this page count (having more references is encouraged). Although there are no explicit page limits or formatting requirements, if proposals are much shorter or longer than the norm, the Ph.D. committee may question the reasons for this.
- Three main criteria are usually applied in evaluating a proposal:
  - Intellectual merit: What is the importance of the activity to advancing knowledge or understanding?
  - Expected impact: What impact can be expected in terms of particular research communities and on society in general?
  - Feasibility: How likely are the stated goals to be achieved by the candidate?
• Based on these criteria, the Thesis Proposal should contain:
  • An overview of the state of the art, which helps to show that the candidate has a good grasp of the relevant research fields.
  • A brief summary of research results obtained so far by the candidate. This includes citing prior publications and current submissions produced by the student.
  • A clear description of the remaining problems and goals.
  • Some details of the proposed technical approach.
  • Clear arguments as to why the work is interesting in terms of intellectual merit and expected impact.
  • An explanation of how the goals can be accomplished within the expected amount of time.
• The Thesis Proposal should not be
  • A preliminary draft of the thesis.
  • Particular chapters or parts of the thesis.
  • A survey of the candidate's research field.
  • An existing publication or technical report.

Presentation Guide:
It is recommended that you prepare a research presentation lasting about 40 minutes and be prepared to answer questions from the committee both during and following the presentation. The presentation will include the topics outlined above and should cover a description of the problem, related background work, and your research work up to the point of the exam. Focus on your results and their context within your field. The future work being proposed as part of your Comprehensive exam is essential and must be included, but you need to keep the discussion of future work brief. Of course, different research advisors may have a slightly different perspective on what is important; but you will need to demonstrate that you are knowledgeable in the area of your research proposal and are able to apply your knowledge to new problems. You will also be evaluated on whether your research topic is appropriate and satisfies the requirements for a PhD dissertation.