

Student Name: _____
Faculty Committee: _____

Date: _____
Attempt # _____

Oral Qualifying Exam Guidelines and Rubric

This exam is to assess a student's understanding of physics at the undergraduate level, and to determine whether they are prepared to take graduate courses and begin research.

Expectations for student understanding:

- If you have done research, be prepared to talk about it.
- Conceptual understanding of equations and physical principles; communicates scientific ideas clearly
- Understand and be able to explain key undergraduate-level concepts in classical mechanics, quantum mechanics, electricity and magnetism, and solve related problems.
 - Example: Know, understand, and be able to explain the hydrogen atom: structure, energy levels, interaction with radiation, quantum numbers.

Part of the assessment may include:

- Energy arguments
- How you approach a problem when you don't immediately know the answer

Rubric for faculty to evaluate students

category	Question topic (e.g. H atom, Maxwell's equations, gravity)	Did not demonstrate adequate mastery	Demonstrated marginal mastery	Demonstrated sufficient mastery	Exam did not cover this topic
Research					
Classical					
Quantum					
E & M					
other					
other					

Note: Each exam may not cover all topics; weighting between topics is left up to the committee.

Overall Grade PASS/FAIL: _____

Additional comments / feedback to students: _____
