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Changes to the PhD Physics Qualifying Exams
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In response to surveys and discussions with Graduate Students and Faculty, the Graduate Studies and Qualifier Committees have proposed, and the faculty approved, the following updates to the physics PhD Qualifying Exams.

Continuing Policies: The follow policies regarding the physics qualifiers will remain in place.

- 1) The physics PhD qualifying exam consists of three separate tests, Classical & Statistical Mechanics, Quantum Mechanics, and Electricity and Magnetism.
- 2) Each test is taken and passed separately.
- 3) The qualifiers are held in August and January, the week before the start of the semester.
- 4) Students have two official attempts to pass each qualifier. If necessary, students may petition the faculty for a third attempt at one or more exams.
- 5) After passing the related core graduate course (Quantum Mechanics II (5403), Electrodynamics II (5583), Classical (5153) and Statistical (5163) Mechanics) students are required to take the related qualifying exam.
- 6) However, no student is required to take more than two exams in August and one in January, even if they have passed the relevant courses in more topics.
- 7) During their first year, students may take a free attempt at any one or more of the qualifying exams. These attempts do not count as one of the two official attempts. Only one free attempt at any single qualifier is allowed.

New Test Structure: (To be implemented in August 2023)

1. Each exam is 3 hours. Students with academic accommodations can take the exams as appropriate to meet their accommodations.
2. Each test has 5 questions. The questions are written by an individual faculty member and reviewed by the qualifier editors. The current exam topics are used as a guide.
3. The questions are divided roughly into 3 undergraduate level questions and 2 graduate level questions.
4. The Classical and Statistical Mechanics exam will consist of at least 2 Classical Mechanics problems and at least 2 Statistical Mechanics/Thermodynamics problems.
5. 4 of the 5 questions count as the student's grade on the exam.
 - a. A student may choose to answer only 4 questions, or
 - b. The question with the lowest grade for each student will be dropped. The other 4 questions will be used to grade the exam.

Grading and Feedback after the tests: (To be implemented in August 2023)

1. Passing an exam question requires earning 50% or more points on the question.
2. Each question is graded by two faculty members. Discrepancies between scores (either one "pass" and one "fail" or a grade difference of 20% or more) are resolved. The average score is counted as the grade for each question.

3. An automatic pass of an exam is passing 2 or more questions (at 50% or above) AND earning 50% or more of the points on the 4 questions counted towards the grade.
4. An automatic fail of an exam is passing less than 2 questions (at 50% or more).
5. The Graduate Studies Committee considers exam scores between automatic pass and automatic fail and recommends a pass or fail.
6. A Master's pass of an exam is passing two problems and receiving at least 40% of the points OR receiving more than 50% of the points on the 4 questions counted in the grade. A Master's pass can be used to earn a non-thesis Master's degree.
7. The entire faculty reviews and approves all exam results at a meeting after the grading is complete.
8. Soon after the exam results are verified, students are informed of the results.
 - a. Students who pass one or more exams are informed of their status towards completing the qualifier and/or provided information next steps for the PhD.
 - b. Students who do not pass one or more exams are informed they did not pass. Students are given the option to receive general feedback regarding the exam(s).
 - c. If student requests feedback on their work on an exam, this is provided by the editor of that exam. A member of the Graduate Studies Committee will also be available if requested by the student. Specifics regarding the number of problems passed and their score are not given.

Potential Future Changes:

These changes to the physics qualifying exams will be monitored and assessed by the Qualifier and Graduate Studies Committees, informed by discussions and feedback from students and faculty. Further modifications will be implemented with input from graduate students and approval by the entire faculty.

Some updates are currently being planned. This includes providing a few example problem solutions for each exam to help students understand what is expected. The Graduate Studies and Qualifier committees also will review and update as needed the current descriptions of the exams and the exam topics.