

### **Information on the UConn Physics Department Preliminary Examinations**

As part of the PhD degree in Physics at UConn every student is required to pass the Preliminary Examinations (“prelims”), which have both written and oral exam components. These exams are intended to test the student on a broad foundation of physics knowledge. The rules governing the exams are as follows:

- 1) There are four written prelims given on separate days:
  - (a) Electrodynamics (at the level of PHYS 5301 [306])
  - (b) Classical Mechanics (at the level of PHYS 5201 [318])
  - (c) Quantum Mechanics (at the level of PHYS 5401 [322] and 5402 [323])
  - (d) Statistical Mechanics (at the level of PHYS 5500 [324])

The Preliminary Examination Committee (“prelim committee”) prepares and grades the written exams, and reports the grades to the Faculty in a special prelim faculty meeting for ratification.

- 2) All four exams are given twice a year, as soon as is feasible before the beginning of each semester. The Quantum Mechanics exam will be 4 hours in duration; the other exams will be 3 hours.
- 3) A student is required to pass all four written exams prior to the beginning of his/her sixth semester in the PhD program. A student is strongly encouraged to take the exams as soon as is consistent with his/her background in the material covered. There is to be no penalty if a student fails an exam in an early attempt.
- 4) After having passed the written prelims, the student is admitted to the oral examination (“oral”). It should be held as soon as possible, and at most within 1 year from the time the student passes the written exams. An Oral Examination Committee (“oral committee”) consisting of the student’s Advisory Committee and two other faculty members appointed by the Chair of the prelim committee conducts the oral. In the oral the student gives a presentation of approximately 20 minutes on an application of physics in contemporary science, engineering or technology, followed by an oral examination of the basic physics concepts and contextual questions related to the student’s presentation. The oral committee may invite the student back to another session before deciding on the final outcome of the exam. The student should discuss the topic of the oral in advance with his/her Principal Advisor.
- 5) A student who has not passed all the written exams after exhausting the allowed attempts cannot be admitted to the oral by vote of the prelim faculty meeting. At the request of the student or his/her principal advisor, his/her case is referred to a separate Appeals Committee appointed by the Head of the Department. The appeals committee must have no overlap with the student’s advisory committee or the last prelim committee that graded the student’s work. This committee will study the case and make a recommendation to the entire faculty for a vote at a later date. On this occasion the core documents related to the appeal such as the appeal letter and the transcript and prelim history of the student must be made available to the entire faculty.
- 6) At the request of the prelim committee, the Principal Advisor of a part-time student must submit an appeal as in part 5 if an extension of the time limits is needed. Such an appeal does not in itself indicate unsatisfactory performance by the student.