Chemical Physics, Doctor of Philosophy (Ph.D.)

Course Title Credits
Core Requirements
24 credits of coursework including: 24
  PHYS622 Introduction to Quantum Mechanics I
  PHYS623 Introduction to Quantum Mechanics II
  CHEM691 Quantum Chemistry II
  Advanced laboratory course
  Advanced course
  Seminar courses
    Two Laboratory Rotations
Dissertation Research Requirements
  CPH899 Doctoral Dissertation Research 12
Total Credits 36

Students must pass the written Qualifying Examination passed at the Ph.D. level, normally taken at the beginning of the second year. Maintain a B average, present a scholarly paper research presentation, 24 graduate course credits including:

1. Two credits of seminar
2. Advanced laboratory course
3. Advanced course outside of the student's main field of study at the 600 level or above

In order to advance to Ph.D. candidacy, the student must submit a scholarly paper and make an oral presentation. The paper and presentation are evaluated by a candidacy committee consisting of at least two faculty members, generally including the advisor and a member of the advisory committee. Students with a well-developed thesis topic and research results are expected to include these results together with further research plans in their paper and presentation. Students less far along with research will present background material and summaries of the research areas in which they will be working. A concise review of the literature is expected, along with a bibliography of the most important literature. The length of the paper is expected to be between approximately 20 double space pages (12-point font) with 1-inch margins. The paper is to be submitted to the candidacy committee at least two weeks before the date of the oral presentation. The presentation is to last approximately 50 minutes and can be part of regularly scheduled seminar series such as the Informal Statistical Mechanics Seminar or the Nonlinear Dynamics Seminar. Two members of the candidacy committee must be present and there should be sufficient time for questions and discussion. Within 12 to 18 months after beginning Ph.D. research, the student is to select a Ph.D. Thesis Examination Committee. 12 credits of CPH899 (Ph.D. dissertation research, only available after advancement to Ph.D. candidacy) Written Ph.D. dissertation. The format of the dissertation (font, margins, etc.) must follow the University of Maryland Thesis and Dissertation Style Guide.