

## **Prelim Exam Policy (adopted on June 11, 2020)**

A written exam is required for admission to PhD candidacy by the Graduate School. A passing grade for the written exam must be achieved before the oral exam can be taken. Format of the written prelim exam, criteria for passing the exam, the number of attempts at the written exam are described in details below.

### **Format of the written prelim exam**

The written exam will remain at the current level (testing undergraduate level physics knowledge) and be given over one day (date and time to be determined by the graduate Coordinator). Duration of the exam will be six hours. There will be two opportunities to take the exam per academic year: the week before the Fall and Spring semesters. Topics of the exam will be Classical Mechanics, Electrodynamics, and Quantum Mechanics. A student will be judged to have passed or failed the exam based on the number of questions successfully solved (see below for the definition of “successfully solved”). A prelim exam committee will compose an exam of six questions (two questions from each of the above mentioned three subjects), and a student needs to achieve Pass grades on four or more questions to pass the exam.

### **Composition of the committee**

The prelim exam committee will consist of six faculty members.

### **Duration of service**

Each committee member will serve for two years (with staggered terms).

### **Blind grading and passing criteria**

Each solution for a given problem will be graded by three prelim exam committee members. A student should not write down his/her name (or student ID) on answer sheets. Instead, a prelim ID number created by the Graduate Coordinator in advance should be listed at the top of each answer sheet. In this way, student’s identity is completely hidden to the prelim exam committee members to ensure a fair and influence-free grading. When the graded exam result is reported back to the Graduate Coordinator by the prelim exam committee, the Graduate Coordinator then announces the result of the exam.

Each question is graded Pass or Fail by a committee member. Considering the overall response by a student, prelim exam committee members grade if the answer demonstrates an appropriate level of understanding of the problem by the student. Three separate gradings for a problem will be averaged to determine Pass or Fail of a question. To pass the exam, a student needs to achieve passing marks on four or more questions.

### **Number of attempts at written exam**

A student will be given a total of three chances to take the written exam (normally, before the beginning of student's first, second, and third semesters). Petitions to postpone an attempt at the written prelim exam must be made to the graduate coordinator at least one week before the date of the exam. The graduate coordinator may consult with the student's advisory committee to make this decision. The result will be communicated to the students at least 72 hours before the beginning of the exam. Once student's 3 possible attempts have expired or the student has not passed the exam after the 3rd attempt, the student will be deemed to have failed the written exam and will not be granted PhD candidacy.

### **Inception**

This proposal, if accepted by the faculty, would begin with the Fall 2020 semester. Those students already in our program ("continuing students") who have not yet been admitted to PhD candidacy will need to pass the written exam under the new policy (see Addendum for detailed make-up of questions for these students).

### **Addendum**

Continuing students who passed only Day 1 exam before: Need to solve only Quantum Mechanics questions of the new exam and obtain passing marks on one or more questions.

Continuing students who passed only Day 2 exam before: Need to solve only E&M and Classical Mechanics questions of the new exam and obtain passing marks on two or more questions.

Continuing students who did not pass either of Day 1 or Day 2 exam: Need to pass the new written exam within the number available attempts (the number of attempts for continuing students is 4 under the old policy and this number is honored for continuing students).

The worked out, correct solutions to the prelim exam problems are to be made available to the students, after the exam has been graded.