

## DEPARTMENT POLICY CONCERNING THE PRELIMINARY EXAMINATION

### INTRODUCTION

The Preliminary Examination is required by the Physics Department of all students wishing to complete a graduate degree, with the exception of students completing a Master's degree via the thesis option. As a result of the examination, taking into account the student's entire academic and research record as well as his or her performance on the examination, the faculty may declare the student's performance satisfactory for the Master's level, which permits the student to obtain a Master's degree in Physics on completion of the other requirements, and/or it may declare the student's performance satisfactory for the Ph.D. level, which permits the student to take the Qualifying Examination, required by the university of all Ph.D. candidates. Alternatively, the faculty may deem the student's performance inadequate for either or both of these levels.

The Preliminary Examination is given just before the Fall quarter begins, and consists of two six-hour examinations given over a two day period. Each day's session is divided into two three-hour blocks. The first day will cover classical mechanics, electricity and magnetism, and mathematical methods. The second day will cover quantum mechanics, statistical mechanics and thermodynamics, modern physics, lab methods and data analysis. The specific material covered in the examination is listed in a syllabus maintained by the department and available to students. Also available are copies of recent Preliminary Examinations.

The questions in the examination are solicited from the entire faculty and are not limited to the material covered in the graduate courses.

### ELIGIBILITY

Students may choose to take the examination immediately upon entrance to the program if they feel that their background is sufficiently strong. This initial attempt is not counted against the total number of times (two) that a student is allowed to take the exam after beginning study in the program.

Students who have had no prior graduate training are required to take the examination no later than the beginning of their second year of graduate study. Exceptions to this schedule are made for students entering with academic deficiencies (as evidenced by the need to take remedial courses, for example). Deferrals in scheduling the examination must be approved both by the student's faculty adviser and by the Chair of the Graduate Curriculum Committee.

However, no student may delay taking the examination beyond the beginning of his or her third year at Davis. This limit also applies to students completing a Master's degree by the thesis option and then continuing for a Ph.D.

A student entering with a Master's degree or equivalent training may take the examination on entrance (providing he or she has notified the Chair of the Admissions Committee of this intention) but has the option of taking the examination at the beginning of the second year instead.

Students who were not deemed by the faculty to have satisfied the requirement the first (after beginning study in the program) time they took the examination may take it again, but only if it is taken in the succeeding year.

A list of continuing students expected to take the examination will be prepared during the Spring quarter by the Chair of the Graduate Curriculum Committee after consultation with the graduate advisers; students required to take the examination at the next offering will be notified in writing about the first of the previous May.

## GRADING OF THE EXAMINATION

Students will identify themselves on the examination papers with a code letter so that the grading of the examination will be blind.

A student may pass or fail the entire examination, or may pass one of the two individual sections and fail the other. In the latter case, the student needs to retake in the subsequent year only the section which he or she failed. If both sections are taken, passage of the entire exam is based on an acceptable combined score for both sections, and does not necessarily require each section be passed individually. If, however, just one section is retaken the following year, passage is based on that section alone.

On completion of the grading, students will be allowed to see their papers and the associated scores. Should some part of the examination not have been graded or a correct answer marked wrong, the student may petition the Chair of the Examination Committee in writing. Such petitions must be entered within two days of completion of grading. In no case will petitions for additional partial credit for incorrect answers be entertained. The Chair of the Examination Committee will hold final authority concerning the disposition of such petitions, including re-grading if necessary.

On completion of the grading process, the Graduate Curriculum Committee will evaluate each student's entire academic and research record and recommend to the faculty the appropriate action in each case. The subsequent faculty actions will then be communicated to the students individually in writing.

## APPEALS PROCESS

The decision as to whether, and at what level, a student passes the Preliminary Examination is made by the faculty as a whole, and is based on both the examination grade and "the student's entire academic and research record." Student appeals of such a decision should be extremely rare, and must require exceptional circumstances. Appeals may fall into two categories:

1. Appeals of the decision itself, that is, requests to change a failing grade to a passing grade: such cases shall be governed by the same criteria as the University of California policies on grade changes. A change may be made only if a clerical or procedural error can be documented. No change may be made on the basis of reassessment of the quality of a student's work or the completion of additional work.
2. Requests for a third attempt at the examination: a student making such an appeal must demonstrate exceptional circumstances -- academic or personal -- and must offer evidence that was not presented at the original faculty meeting. An appeal will normally require the written support of a faculty member, either the student's academic or research adviser or someone else who is well acquainted with the circumstances of the appeal.

In either case, a student's appeal shall first be considered by the Graduate Curriculum Committee. If the appeal does not meet the criteria above, the committee may reject it, with an explanation to the student. If it does meet the criteria, the committee shall make a recommendation to the faculty. Only a vote of the faculty may reverse the faculty's original decision.