PhD in Physics

Admission Requirements
Applicants are considered on an individual basis. Complete transcripts of all undergraduate and any graduate work must be submitted. In addition to the Graduate College minimum requirements, applicants must meet the following program requirements:

- **Baccalaureate Field** No restrictions. Prior academic work must include at least 20 semester hours of physics, including upper-level undergraduate electrodynamics, quantum mechanics, and classical mechanics.
- **Grade Point Average** At least 2.75/4.00 for the final 60 semester (90 quarter) hours of undergraduate study.
- **Tests Required** GRE General exam is required; GRE Physics subject exam is highly recommended, but not required.
- **Minimum English Competency Test Score**
  - TOEFL iBT 80, with subscores of Reading 19, Listening 17, Speaking 20, and Writing 21, OR
  - IELTS Academic 6.5, with 6.0 in each of the four subscores, OR
  - PTE-Academic 54, with subscores of Reading 51, Listening 47, Speaking 53, and Writing 56.
- **Letters of Recommendation** Three required.
- **Personal Statement** Required.
- **Nondegree Applicants** Nondegree applicants must submit transcripts and a personal statement.

Degree Requirements
In addition to the Graduate College minimum requirements, students must meet the following program requirements:

- **Minimum Semester Hours Required** 96 from the baccalaureate.
- **Coursework** At least 32 hours. A maximum of 6 hours at the 400 level can be approved to fulfill these requirements. The remaining hours must be at the 500 level and may not include PHYS 596 and PHYS 599, or more than 4 hours of PHYS 595. Courses taken outside of physics may only fulfill these requirements with prior approval from the department.

Students who enter the program with graduate-level credit from other institutions can petition the department to reduce the required hours on coursework. Students found to be deficient in specific areas of physics on the basis of course work taken prior to entering the program may have to complete additional hours beyond the minimum 32 hours.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>PHYS 501</td>
<td>Electrodynamics</td>
<td></td>
</tr>
<tr>
<td>PHYS 511</td>
<td>Quantum Mechanics I</td>
<td></td>
</tr>
<tr>
<td>PHYS 561</td>
<td>Statistical Mechanics I</td>
<td></td>
</tr>
<tr>
<td>PHYS 595</td>
<td>Graduate Seminar (four semesters)</td>
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A minimum of 14 hours in the student's major area, approved by the director of graduate studies and the faculty advisor.

- **Examinations**
  - **Departmental Qualifying Examination**: Required.
  - **Preliminary Examination**: Required.
- **Dissertation** Required.
- **Other Requirements** Each student must serve as a teaching assistant for at least two semesters.