## REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY

### DODGE COLLEGE OF ARTS AND SCIENCES

### THE UNIVERSITY OF OKLAHOMA

**Academic Year**

For Students Entering the Oklahoma State System for Higher Education
Summer 2023 through Spring 2024

<table>
<thead>
<tr>
<th>Program Code</th>
<th>Program</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>D780</td>
<td>Physics</td>
<td>Doctor of Philosophy</td>
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</tr>
</tbody>
</table>

### Minimum Total Hours: 90

**Program Code:** D780

### Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PHYS 5000</td>
<td>Introduction to Graduate Studies in Physics</td>
<td>0</td>
</tr>
<tr>
<td>PHYS 5013</td>
<td>Mathematical Methods in Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 5153</td>
<td>Classical Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 5163</td>
<td>Statistical Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 5393</td>
<td>Quantum Mechanics I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 5403</td>
<td>Quantum Mechanics II</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 5573</td>
<td>Electrodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 5583</td>
<td>Electrodynamics II</td>
<td>3</td>
</tr>
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</table>

**Required Physics and/or Astronomy Coursework (36 hours)**

- 15 hours in PHYS and ASTR coursework at the 5000-level and above (excluding 5980 and 6980), or in related fields at the graduate-4000-level and above as approved by the advisory committee and graduate liaison.

**Additional Coursework (52 hours)**

- Additional graduate-level coursework as needed to reach 90 post-baccalaureate hours, as approved by the advisory committee.

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PHYS 6980</td>
<td>Research for Doctoral Dissertation (minimum 2 hours)</td>
<td>2</td>
</tr>
</tbody>
</table>

### Total Credit Hours: 90

1 If the dissertation topic is in Astronomy, the curriculum must include at least 12 hours of Astronomy courses, including ASTR 4303 and any ASTR courses at the 5000-level or above, excluding 5980 and 6980.

### Note:

The General Exam consists of a written paper and oral presentation on an area related to proposed thesis. The General Exam can only be taken after passing the internal departmental qualifying exams on Quantum Mechanics, Electrodynamics, Classical & Statistical Mechanics and (if appropriate) Astrophysics.

### General Requirements for Doctoral Degrees

A student should expect to spend at least the equivalent of three full academic years beyond the bachelor’s degree to obtain the doctoral degree. During this period the student will take appropriate graduate coursework, successfully complete the general examination, and successfully defend and submit the final dissertation.

All coursework applied to the doctoral degree must carry graduate credit.