Physics Minor

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Program Director: Carter Hall, Ph.D.

This minor provides a rigorous foundation in physics for students who choose not to complete the entire physics major.

Students interested in earning a minor in physics should contact the undergraduate advisor for the Physics Department.

Requirements

The minor begins with a set of two introductory courses (6 credits) in electromagnetic fields (PHYS260 or PHYS272) and waves (PHYS270 or PHYS273). As part of this introduction to Physics, the minor also requires a one-credit introductory physics laboratory (PHYS174, PHYS261, or PHYS271) involving techniques of data gathering and analysis. To obtain a deeper understanding of physics, the minor requires three additional upper-level courses (3-4 credits each), which students can select from the list below.

- Other upper level Physics courses can be substituted only with approval from the Department’s undergraduate director and the Faculty Minor Advisor.
- All courses must be completed with a grade of "C-" or better to be counted towards the minor.
- No more than 7 credits in this minor can count toward major requirements. Students with more than 7 credits of overlap must substitute non-overlapping 300 or 400 level courses from the above list to reduce the overlap to no more than 7 credits.
- Physics majors and students majoring in Astronomy are not eligible to complete the Physics Minor due to the large number of overlapping course requirements.

Courses Required for the Minor

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHYS174</td>
<td>Physics Laboratory Introduction</td>
<td>1</td>
</tr>
<tr>
<td>PHYS261</td>
<td>General Physics: Mechanics, Vibrations, Waves, Heat (Laboratory)</td>
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<tr>
<td>PHYS271</td>
<td>General Physics: Electrodynamics, Light, Relativity and Modern Physics (Laboratory)</td>
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<tr>
<td>PHYS272</td>
<td>Introductory Physics: Fields</td>
<td>3</td>
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<tr>
<td>or PHYS260</td>
<td>General Physics: Vibration, Waves, Heat, Electricity and Magnetism</td>
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</tr>
<tr>
<td>PHYS273</td>
<td>Introductory Physics: Waves</td>
<td>3</td>
</tr>
<tr>
<td>or PHYS270</td>
<td>General Physics: Electrodynamics, Light, Relativity and Modern Physics</td>
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<td>Select three of the following:</td>
<td>9-12</td>
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<tr>
<td>PHYS371</td>
<td>Modern Physics</td>
<td></td>
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<tr>
<td>PHYS373</td>
<td>Mathematical Methods for Physics II</td>
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<tr>
<td>PHYS375</td>
<td>Experimental Physics III: Electromagnetic Waves, Optics and Modern Physics</td>
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<tr>
<td>PHYS401</td>
<td>Quantum Physics I</td>
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</table>

Total Credits: 16-19

Prerequisites

MATH140, MATH141, MATH241, MATH240, MATH246, PHYS171 are prerequisites for some of the courses in this program.