PHYSICS MAJOR

Requirements

All students planning to major in physics are required to take the following courses. Because of the sequential nature of the curriculum, students should pursue the following plan of study.

Students enrolled in the 3-2 Cooperative Program in Engineering complete the requirements for the physics degree through the junior year. They then transfer to an engineering program and complete an additional two years. They earn a double bachelor’s degree in physics and engineering.

### Freshman

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHYS 1601</td>
<td>Introduction to Physics I</td>
<td>5</td>
</tr>
<tr>
<td>&amp; PHYS 1511</td>
<td>and Physics I Lab</td>
<td></td>
</tr>
<tr>
<td>PHYS 1602</td>
<td>Introduction to Physics II</td>
<td>5</td>
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<tr>
<td>&amp; PHYS 1512</td>
<td>and Physics II Lab</td>
<td></td>
</tr>
<tr>
<td>MATH 1206</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1207</td>
<td>Calculus II</td>
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### Sophomore

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<tr>
<td>PHYS 2005</td>
<td>Introduction to Modern Physics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2201</td>
<td>Classical Mechanics I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1321</td>
<td>General Chemistry I</td>
<td>6</td>
</tr>
<tr>
<td>&amp; CHEM 1331</td>
<td>and General Chemistry Lab I</td>
<td></td>
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<tr>
<td>CHEM 1322</td>
<td>General Chemistry II</td>
<td>6</td>
</tr>
<tr>
<td>&amp; CHEM 1332</td>
<td>and General Chemistry Lab II</td>
<td></td>
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<tr>
<td>MATH 2004</td>
<td>Multivariable Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2005</td>
<td>Multivariable Calculus II</td>
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### Junior

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<tr>
<td>PHYS 2011</td>
<td>Intermediate Laboratory</td>
<td>2</td>
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<tr>
<td>PHYS 3001</td>
<td>Electricity and Magnetism I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 3011</td>
<td>Advanced Laboratory I</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 3101</td>
<td>Math Methods in Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 3102</td>
<td>Math Methods in Physics II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 3211</td>
<td>Computational Physics and Programming I</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 3401</td>
<td>Thermo and Stat Physics</td>
<td>4</td>
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<td>PHYS 4005</td>
<td>Quantum Mechanics I</td>
<td>4</td>
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<td><strong>Credits</strong></td>
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### Senior

Select two of the following electives (except those in the 3-2 Cooperative Program in Engineering):

<table>
<thead>
<tr>
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<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHYS 3601</td>
<td>Optics</td>
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<tr>
<td>PHYS 4003</td>
<td>Classical Mechanics II</td>
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<tr>
<td>PHYS 4004</td>
<td>Electricity and Magnetism II</td>
<td></td>
</tr>
<tr>
<td>PHYS 4006</td>
<td>Quantum Mechanics II</td>
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</tr>
<tr>
<td>PHYS 4011</td>
<td>Nuclear and Particle Physics</td>
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</tr>
<tr>
<td>PHYS 4012</td>
<td>Solid State Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 4401</td>
<td>Undergraduate Research I</td>
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</tr>
<tr>
<td><strong>Credits</strong></td>
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**Availability**

The major in physics is available at Fordham College at Rose Hill. Students in Fordham School of Professional Studies may major in physics only if their schedules are sufficiently flexible to permit them to take day courses on the Rose Hill campus.

**Fordham College at Rose Hill students:** The requirements above are in addition to those of the Core Curriculum.

**Professional and Continuing Studies students:** The requirements above are in addition to those of the PCS Core Curriculum.

Updated: 09-03-2020