# PHYSICS MINOR

The minor in physics gives students an understanding of the most essential concepts in the field and carries the same prerequisites as the major, followed by a lighter set of requirements.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 220-1</td>
<td>Single-Variable Differential Calculus</td>
</tr>
<tr>
<td>&amp; MATH 220-2</td>
<td>and Single-Variable Integral Calculus</td>
</tr>
<tr>
<td>or MATH 218-1</td>
<td>Single-Variable Calculus with Precalculus</td>
</tr>
<tr>
<td>&amp; MATH 218-2</td>
<td>and Single-Variable Calculus with Precalculus</td>
</tr>
<tr>
<td>&amp; MATH 218-3</td>
<td>and Single-Variable Calculus with Precalculus</td>
</tr>
<tr>
<td>PHYSICS 140-1</td>
<td>Fundamentals of Physics</td>
</tr>
<tr>
<td>&amp; PHYSICS 140-2</td>
<td>and Fundamentals of Physics</td>
</tr>
<tr>
<td>&amp; PHYSICS 140-3</td>
<td>and Fundamentals of Physics</td>
</tr>
<tr>
<td>&amp; PHYSICS 136-1</td>
<td>and General Physics Laboratory</td>
</tr>
<tr>
<td>&amp; PHYSICS 136-2</td>
<td>and General Physics Laboratory</td>
</tr>
<tr>
<td>&amp; PHYSICS 136-3</td>
<td>and General Physics Laboratory</td>
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<tr>
<td>or PHYSICS 135-1</td>
<td>General Physics ISP</td>
</tr>
<tr>
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<td>General Physics ISP</td>
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<tr>
<td>&amp; PHYSICS 125-2</td>
<td>and General Physics for ISP</td>
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</tr>
<tr>
<td>&amp; PHYSICS 126-3</td>
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</tbody>
</table>

**Minor Requirements (9 units)**

Core mathematics and mathematical tools courses listed below or equivalent courses approved by the department:

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
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<tbody>
<tr>
<td>MATH 230-1</td>
<td>Multivariable Differential Calculus</td>
</tr>
<tr>
<td>&amp; MATH 230-2</td>
<td>and Multivariable Integral Calculus</td>
</tr>
<tr>
<td>PHYSICS 311-1</td>
<td>Mathematical Tools for the Physical Sciences</td>
</tr>
<tr>
<td>&amp; PHYSICS 311-2</td>
<td>and Mathematical Tools for the Physical Sciences</td>
</tr>
<tr>
<td>or MATH 240-0</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>&amp; MATH 250-0</td>
<td>and Elementary Differential Equations</td>
</tr>
</tbody>
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Core physics courses

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<tbody>
<tr>
<td>PHYSICS 239-0</td>
<td>Foundations of Modern Physics</td>
</tr>
<tr>
<td>PHYSICS 330-1</td>
<td>Classical Mech</td>
</tr>
<tr>
<td>PHYSICS 333-1</td>
<td>Advanced Electricity &amp; Magnetism</td>
</tr>
</tbody>
</table>

2 other 300-level physics or astronomy courses other than:

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<tr>
<td>PHYSICS 311-1</td>
<td>Mathematical Tools for the Physical Sciences</td>
</tr>
<tr>
<td>&amp; PHYSICS 311-2</td>
<td>and Mathematical Tools for the Physical Sciences</td>
</tr>
<tr>
<td>PHYSICS 312-0</td>
<td>Scalar and Vector Field Methods in Physics</td>
</tr>
<tr>
<td>PHYSICS 335-0</td>
<td>Physics of Magic</td>
</tr>
<tr>
<td>PHYSICS 398-0</td>
<td>Independent Thesis Research</td>
</tr>
<tr>
<td>PHYSICS 399-0</td>
<td>Independent Study</td>
</tr>
<tr>
<td>ASTRON 398-0</td>
<td>Honors Independent Study</td>
</tr>
<tr>
<td>ASTRON 399-0</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

1 PHYSICS 312-0 Scalar and Vector Field Methods in Physics may be used in place of MATH 230-2 Multivariable Integral Calculus with department permission.