PHYSICS MAJOR, ASTRONOMY CONCENTRATION (B.S.)

120 credits of coursework is required for the baccalaureate degree with a minimum 2.0 overall GPA, and a minimum 2.0 major GPA.

Program Requirements

Students must complete General Education requirements (http://catalog.montclair.edu/undergraduate-graduate-degree-requirements/general-ed-ba-bs/) and World Languages and Cultures Requirements (http://catalog.montclair.edu/undergraduate-graduate-degree-requirements/world-languages-cultures-requirement/).

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHYS 191</td>
<td>University Physics I</td>
<td>4</td>
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<tr>
<td>PHYS 192</td>
<td>University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 198</td>
<td>Introductory Physics Seminar</td>
<td>1</td>
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<tr>
<td>PHYS 210</td>
<td>Intermediate Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 220</td>
<td>Oscillations, Waves, and Optics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 230</td>
<td>Intermediate Physics Laboratory</td>
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<tr>
<td>PHYS 300</td>
<td>Junior/Senior Physics Seminar</td>
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<td>PHYS 320</td>
<td>Statistical and Thermal Physics</td>
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<td>PHYS 330</td>
<td>Advanced Physics Laboratory</td>
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<tr>
<td>PHYS 340</td>
<td>Electricity and Magnetism</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 360</td>
<td>Modern Physics</td>
<td>3</td>
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<td>PHYS 464</td>
<td>Quantum Mechanics</td>
<td>3</td>
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Physics/Astronomy Required Courses

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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>CHEM 121</td>
<td>General Chemistry II</td>
<td>4</td>
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<tr>
<td>CSIT 104</td>
<td>Python Programming I</td>
<td>3</td>
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<tr>
<td>MATH 122</td>
<td>Calculus I</td>
<td>4</td>
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<td>or AMAT 120</td>
<td>Applied Calculus A</td>
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<tr>
<td>MATH 221</td>
<td>Calculus II</td>
<td>4</td>
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<tr>
<td>or AMAT 220</td>
<td>Applied Calculus B</td>
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<tr>
<td>MATH 222</td>
<td>Calculus III</td>
<td>4</td>
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<tr>
<td>AMAT 350</td>
<td>Applied Mathematics I</td>
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<tr>
<td>or MATH 325</td>
<td>Ordinary Differential Equation</td>
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<tr>
<td>or PHYS 377</td>
<td>Mathematical Physics</td>
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</table>

Total Credits 78-81

Collateral Courses

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<th>Credits</th>
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<tbody>
<tr>
<td>CHEM 120</td>
<td>General Chemistry I</td>
<td>4</td>
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