PHYSICS B.A.

Bachelor of Arts - Physics

General Education Requirements

Information regarding these requirements can be found in the General Education Section (http://catalog.umt.edu/academics/general-education-requirements/) of the catalog.

Summary

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Lower-Division Physics</td>
<td>10</td>
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<tr>
<td></td>
<td>Upper-Division Physics</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Physics Electives</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Math Requirements</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Computer Science Requirements</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Advanced College Writing Requirement</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>68</td>
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</table>

Degree Specific Credits: 68

Required Cumulative GPA: 2.0

Lower-Division Physics

Complete one of the following Physics sequences:

- Algebra- and Trigonometry-based Physics:
  - PHSX 205N, PHSX 206N: College Physics I and College Physics I Laboratory
  - PHSX 207N, PHSX 208N: College Physics II and College Physics II Laboratory

- Calculus-based Physics (strongly recommended):
  - PHSX 215N, PHSX 216N: Fundamentals of Physics with Calculus I and Physics Laboratory I with Calculus
  - PHSX 217N, PHSX 218N: Fundamentals of Physics with Calculus II and Physics Laboratory II with Calculus

Total Hours: 10

Minimum Required Grade: C-

Upper-Division Physics

Complete all of the following courses:

- PHSX 301: Intro Theoretical Physics
- PHSX 311: Oscillations and Waves
- PHSX 320: Classical Mechanics
- PHSX 323: Intermediate Physics Lab
- PHSX 343: Modern Physics
- PHSX 423: Electricity & Magnetism I
- PHSX 444: Advanced Physics Lab
- PHSX 461: Quantum Mechanics I
- PHSX 499: Senior Capstone Seminar

Total Hours: 30

Minimum Required Grade: C-

Physics Electives

Complete two of the following courses:

- PHSX 425: Electricity & Magnetism II
- PHSX 446: Thermodynamics & Statistical Mechanics
- PHSX 462: Quantum Mechanics II

Total Hours: 30

Minimum Required Grade: C-

Math Requirements

Complete all of the following courses:

- M 171: Calculus I
- M 172: Calculus II
- M 221: Introduction to Linear Algebra
- M 273: Multivariable Calculus

Total Hours: 16

Minimum Required Grade: C-

Computer Science Requirements

Complete one of the following courses:

- CSCI 150: Introduction to Computer Science
- CSCI 151: Interdisciplinary Computer Science I
- PHSX 333: Computational Physics (strongly recommended)

Total Hours: 3

Minimum Required Grade: C-
**Advanced College Writing Requirement**

*Note:* May substitute another advanced writing course as approved by the department chair.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>PHSX 330</td>
<td>Communicating Physics</td>
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<tr>
<td><strong>Total Hours</strong></td>
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Minimum Required Grade: C-