Major Requirements

The UW Physics degree offers four options: Comprehensive, Applied, Teacher Preparation, and Biological Physics. You should choose the option that best meets your educational and career goals. Information about each may be found by clicking on the above links.

Physics degree options have a common core of foundational physics and math courses, with different electives and additional requirements depending on the degree track. A summary chart for the different options is below. Details are in the subpages.

Core Requirements (56-57 credits)

<table>
<thead>
<tr>
<th>Courses</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-level Physics (15 cr)</td>
<td>Mechanics, Electromagnetism, Waves, Optics, and Heat</td>
</tr>
<tr>
<td>100-level Math (15 cr)</td>
<td>Differential Calculus, Integral Calculus, Multi-variable Calculus and Series</td>
</tr>
<tr>
<td>200-level Physics (11 cr)</td>
<td>Thermal and Statistical Physics, Quantum Mechanics I, Mathematical Physics, Intro to Research: Frontiers of Physics</td>
</tr>
<tr>
<td>300-level Math Menu (3-4 cr)</td>
<td>Ordinary Differential Equations, Linear Algebra, Partial Differential Equations, Vector Calculus, Vector Calculus and Complex Variables</td>
</tr>
<tr>
<td>300-level Physics (12 cr)</td>
<td>Electricity and Magnetism I, Electricity and Magnetism II, Electronics Laboratory</td>
</tr>
</tbody>
</table>

Option (Track) Requirements

<table>
<thead>
<tr>
<th>Comprehensi ve (+38-42 cr)</th>
<th>Applied (+38-42 cr)</th>
<th>Teaching (+38-42 cr)</th>
<th>Biological (+38-42 cr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phys 228</td>
<td>AMath 301 (Matlab)</td>
<td>Phys 228</td>
<td>Phys 228</td>
</tr>
<tr>
<td>Additional 1 from Math Menu</td>
<td>Additional 2 from (Math Menu + Phys 228)</td>
<td>Additional 1 from Math Menu</td>
<td>Phys 228</td>
</tr>
</tbody>
</table>
**Core Physics**
- 226 (Particle)
- 324 (QM2)
- 3 Add'l 32x (E&M 3, QM3, Classical Mech, Statistical Mech, Astronomy)

One from:
- 226, 323, 324, 328, 329

226 (Particle)
- 324 (QM 2)
- 1 Add'l 32x

324 (QM2)
- 328 (Stat Mech)

One from:
- 226, 323, 325, 329

**Lab**
- Two advanced labs

231 (Intermediate lab)
- Two advanced labs

One advanced lab
- None

**Res/Sem**
- 3 cr Research or Seminar

3 cr Research or Seminar

3 cr Teach Practicum

3 cr biophysics research

**Elective**
- 2 add'l Physics/Cognate Class (6 cr)

9 cr. Phys/Cognate

At most 5 cr selected intro sci

At most 3 cr add'l lab

Phys 407-8-9

(Physics by Inquiry)

Phys 429

(Biophysics)

**Other Sci**

Intro Chem (142-52-62)

Intro Bio (180-200)

Advanced Bio/Chem (2 courses)

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**Source URL:** https://phys.washington.edu/major-requirements