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>
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</table>
| 100-level Physics (15 cr) | Mechanics  
121 (5)  
122 (5)  
123 (5)  |
| 100-level Math (15 cr) | Electromagnetism  
Waves, Optics, and Heat  
124 or 134 (5)  
125 or 135 (5)  
126 or 136 (5)  |
| 200-level Physics (11 cr) | Multi-variable Calculus and Series  
Thermal and Statistical Physics  
Quantum Mechanics I  
Mathematical Physics  
Intro to Research: Frontiers of Physics  
224 (3)  
225 (4)  
227 (3)  
294 (1)  |
| 300-level Math Menu (3-4 cr) | Ordinary Differential Equations  
Linear Algebra  
Partial Differential Equations  
Vector Calculus  
Vector Calculus and Complex Variables  
Math 307 or AMath 351 (3)  
Math 308 or AMath 352 (3)  
Math 309 or AMath 353 (3)  
Math 324 (3)  
AMath 401 (4)  |
| 300-level Physics (12 cr) | Electricity and Magnetism I  
Electricity and Magnetism II  
Electronics Laboratory  
321 (4)  
322 (4)  
334 (4)  |

Option (Track) Requirements

<table>
<thead>
<tr>
<th></th>
<th>Comprehensive (+38-42 cr)</th>
<th>Applied (+38-42 cr)</th>
<th>Teaching (+38-42 cr)</th>
<th>Biological (+38-42 cr)</th>
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<tbody>
<tr>
<td>Math</td>
<td>Phys 228</td>
<td>AMath 301 (Matlab)</td>
<td>Phys 228</td>
<td>Phys 228</td>
</tr>
<tr>
<td></td>
<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>
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<tr>
<td>Core Physics</td>
<td>226 (Particle) 324 (QM2) 3 Add'l 32x (E&amp;M 3, QM3, Classical Mech, Statistical Mech, Astronomy)</td>
<td>One from: 226, 323, 324, 328, 329</td>
<td>226 (Particle) 324 (QM 2) 1 Add'l 32x</td>
<td>324 (QM2) 328 (Stat Mech) One from: 226, 323, 325, 329</td>
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<tr>
<td>Lab</td>
<td>Two advanced labs</td>
<td>231 (Intermediate lab) Two advanced labs</td>
<td>One advanced lab</td>
<td>None</td>
</tr>
<tr>
<td>Res/Sem</td>
<td>3 cr Research or Seminar</td>
<td>3 cr Research or Seminar</td>
<td>3 cr Teach Practicum</td>
<td>3 cr biophysics research</td>
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<tr>
<td>Elective</td>
<td>2 add'l Physics/Cognate Class (6 cr)</td>
<td>9 cr. Phys/Cognate At most 5 cr selected intro sci At most 3 cr add'l lab</td>
<td>Phys 407-8-9 (Physics by Inquiry)</td>
<td>Phys 429 (Biophysics)</td>
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<td>Other Sci</td>
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