The Ohio State University offers 6 options (A-F) toward completion of a B.S. in Physics (College of Arts and Sciences, ASC) and 11 specialization options for completion of a B.S. in Engineering Physics (College of Engineering, COE). All students must take specific Math and Physics course which we refer to as the Core Requirements. Technical electives and college requirements distinguish the remaining coursework for each option. A summary of the requirements for each option (A-F) as well as the Engineering Physics core is provided in the table below. All ASC options require 181 credit hours of coursework. All Engineering Physics specializations require approximately 193 credit hours of coursework.

### Core Requirements – All Physics and Engineering Physics majors take these classes

- **Minimum Required Physics**: 51 hrs
  - 131-2-3 (Introductory Physics sequence)
  - 261-2-3 (Dynamics of Particles and Waves, Math Methods)
  - 295 (Undergraduate Seminar)
  - 416 (Methods of Experimental Physics)
  - 555 (Electromagnetic Fields and Waves)
  - 596 (Senior Seminar)
  - 621 (Statistical Physics)
  - 631 (Quantum Mechanics)
  - 616 (Advanced Physics Lab)

- **Minimum Required Math and Computer Programming**: 31 hrs
  - Math 151-152-153-254 (Calculus and Analytical Geometry)
  - Math 415 (Ordinary and Partial Differential Equations)
  - Math 513 (Vector Analysis)
  - CS&E 202 (Programming and Algorithms)

### College Requirements – General Education requirements specific to degree granting College.

- **Bachelors of Science in Physics (College of Arts and Sciences)**: ~65 hrs
  - Details on the College website. Note: some options have required GEC courses.
  - GEC for the College of Arts and Sciences.(website: http://artsandsciences.osu.edu/curric/GEC/BS.pdf)

- **Bachelors of Science in Engineering Physics (College of Engineering)**: ~35 hrs
  - Details on the College website. Note: additional required courses for the program outlined in table below
  - GEC for the College of Engineering.(website: http://www.eng.ohio-state.edu/currentstudents/gec.php)

### Summary of Additional Requirements

<table>
<thead>
<tr>
<th>College - Degree Option</th>
<th>Additional Required Physics</th>
<th>Required GEC</th>
<th>Required Technical Electives (some substitutions may be possible)</th>
<th>Free Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASC – Option A</strong></td>
<td>28 517, 656-657,632-633, 622, 664</td>
<td>None</td>
<td>3 Math 568</td>
<td>12</td>
</tr>
<tr>
<td><strong>ASC – Option B</strong></td>
<td>12 517,656, 632</td>
<td>None</td>
<td>19 Math 568 + 16 hrs*</td>
<td>12</td>
</tr>
<tr>
<td><strong>ASC – Option C</strong></td>
<td>4 517 or 622 or 632 or 656</td>
<td>10 Bio 113, Chem 121</td>
<td>24 Chem 122-123, Chem 251-252 + 8 hrs*</td>
<td>15</td>
</tr>
<tr>
<td><strong>ASC – Option F</strong></td>
<td>4 517 or 622 or 632 or 656</td>
<td>None</td>
<td>18 Coherent set of courses at 200 or above, approved by UGS</td>
<td>21</td>
</tr>
<tr>
<td><strong>ENG – All specialization options.</strong></td>
<td>20 517, 656, 632-633, 622, 664</td>
<td>25 Chem 121-125, Eng 181-183, CSE 202, ME 410</td>
<td>3 Math 568 + 30 hrs of technical engineering electives specific to specialization option</td>
<td>3</td>
</tr>
</tbody>
</table>

*Additional hours are restricted to courses at the 200 level or above in an option dependent, restricted set of departments. See an advisor for details