

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/cuffofc/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

College - Degree Option	Additional Required Physics		Required GEC		Required Technical Electives (some substitutions may be possible)		Free Electives
	HRS	Courses	HRS	Courses	HRS	Courses	HRS
<i>ASC – Option A Advanced Physics</i>	28	517, 656-657, 632-633, 622, 664		None	3	Math 568	12
<i>ASC – Option B Physical, Mathematical and Engineering Science</i>	12	517, 656, 632		None	19	Math 568 + 16 hrs*	12
<i>ASC – Option C Biophysics &amp; Biomedical Physics</i>	4	517 or 622 or 632 or 656	10	Bio 113, Chem 121	24	Chem 122-123, Chem 251-252 + 8 hrs*	15
<i>ASC – Option D Pre-Med</i>	None		10	Bio 113-114	40	Mol. Gen 500, Biochem 511, Chem 121-122-123, Chem 251-252-253-254-255	3
<i>ASC – Option E Secondary Education Physics</i>	4	670	10	Bio 113, Chem 121	25	Chem 122-123, Geology 110, Geography 520, Astron. 291	13
<i>ASC – Option F Personalized</i>	4	517 or 622 or 632 or 656		None	18	Coherent set of courses at 200 or above, approved by UGS	21
<i>ENG – All specialization options.</i>	20	517, 656, 632-633, 622, 664	25	Chem 121-125, Eng 181-183, CSE 202, ME 410	3	Math 568 + 30 hrs of technical engineering electives specific to specialization option	

\*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