

PURDUE UNIVERSITY
Department of Physics
B.S. with Applied Physics in Computational Physics Major

Semester	Physics	Math	Lab Sci	Electives	Credits
1	Phys 172 (H) (4 cr.) Mechanics ®Phys 217 (1 cr.)	Ma 165 (4 cr.) Calculus I	Chm 115 (4 cr.)	Foreign Language (3 cr.)	15 - 16
2	Phys 272 (H) (4 cr.) E&M	Ma 166 (4 cr.) Calculus II	Chm 116 (4 cr.)	Foreign Language (3 cr.) Engl 106 or 108 (3-4 cr.)	18 - 19
3	#Phys 290G (3 cr.) (Gen.and Spl. Relativity) #Phys 290F (3 cr.) (Mathematical Physics)	Ma 261 (4 cr.) Calculus III	CS 158/159 (3 cr.) Programming (C Language)	Adv. Engl Comp. (3 cr.)	13 - 16
4	Phys 342 (3 cr.) (Modern Physics) ®Phys 290A (1 cr.)	Ma 262/266/366 Differential Eqns.(3-4 cr.)	CS 314 (3 cr.) Numerical Methods *Applied Elective (3-4 cr.)	General Ed. (3 cr.)	15 - 18
5	Phys 310 (4 cr.) Mechanics Phys 322-450 (5 cr. total) (Optics and Lab)	Math Elective (3 cr.)	C S 478 (3 cr.) Intro to Bioinformatics		15
6	Phys 330 (3 cr.) (Electromagnetism)	Math Elective (3 cr.)	*Applied Elective (3-4 cr.) *Applied Elective (3-4 cr.)	General Ed. (3 cr.)	15 - 17
7	Phys 515 (3 cr.) (Therm & Stat. Mech) Phys 342L (1 cr.) (Modern Lab)	CS 501 (3 cr.)	Phys 580 (3 cr.) Computational Physics	General Ed. (3 cr.) General Ed. (3 cr.)	16
8	Phys 360 (3 cr.) (Quantum)	Phys 570A (3 cr.) Computational Biomolecular Physics	CS 590V (3 cr.) Bimolecular Simulation	General Ed. (3 cr.) General Ed. (3 cr.)	15

- The Applied Physics Program differs from the regular program in that only the second semester of a foreign language must be passed; slightly less physics credits are required; and at least 30 hours of **APPLIED** electives are selected rather than free electives.
- A grade point average of 2.0 in all physics and Applied Electives is required.
- Residency Requirements: At least 32 hrs. of 300 level or above coursework required.
- General Ed. To be chosen from five areas; 1) literature, philosophy, aesthetics; 2) history, political science; 3) anthropology, economics, psychology, sociology; 4) communications; 5) interdisciplinary studies.
- *Applied Elective =1 - 5 credit hours of a Science, Technology or Engineering Class, including upper level physics courses**
Phys 290G or Phys 290F (3 cr.) (Introduction to Mathematical Methods in Physics) may be taken.