**APPLIED PHYSICS B.S.**

![Image](http://undergrad.pbsc.ucsc.edu/)

Name: __________________________ Date: __________________________

(Quarter offered: F=Fall, W=Winter, S=Spring, *= Not offered this year)

ID#: __________________________

Note: All courses on check list must be taken for a letter grade

### INTRODUCTORY REQUIREMENTS

**Calculus:**
- MATH 19A (FWS) ___ OR 20A (F) ___
- MATH 19B (FWS) ___ OR 20B (W) ___

**Vector Calculus:**
- MATH 23A (FWS) ___ AND MATH 23B (FWS) ___

**Chemistry:**
- CHEM 1A (FWS) ___ OR 1B (FWS) ___

**Physics:**
- PHYS 5A/L (F) ___ + 5B/M (W) ___ + 5C/N (S) ___ + 5D (F) ___

Note: To declare Applied Physics as a major, PHYS 5ABC must be completed with a GPA of 2.7 or higher.

**Computer Programming:**
- CMPS 5C (*) ___ OR 5J (FW) ___ OR 5P (S) ___ OR EART 119 (W) ___ OR PHYS 115 (S) ___
  *Students may also satisfy the computer programming requirement by demonstrating their knowledge of programming to a faculty member designated by the Physics department.

### ADVANCED REQUIREMENTS 16 total

**Modern Physics:**
- PHYS 101A Introduction to Modern Physics I (F) ___
- PHYS 101B Introduction to Modern Physics II (W) ___

**Mechanics:**
- PHYS 105 Mechanics (F) ___

**Electricity/Magnetism/Optics:**
- PHYS 110A Electricity, Magnetism, and Optics (W) ___
- PHYS 110B Electricity, Magnetism, and Optics (S) ___

**Thermodynamics:**
- PHYS 112 Thermodynamics and Statistical Mechanics (W) ___

**Math Methods:**
- PHYS 116A Mathematical Methods in Physics (W) ___
- PHYS 116B Mathematical Methods in Physics (S) ___
- PHYS 116C Mathematical Methods in Physics (F) ___

**Electives:** THREE from the following...
- AMS 107/PHYS 107 Introduction to Fluid Dynamics (W) ___
- PHYS 115 Computational Physics (S) ___
- PHYS 120 Polymer Physics (*) ___
- PHYS 129 Nuclear and Particle Astrophysics (W) ___
- PHYS 139A Quantum Mechanics (S) ___
- PHYS 139B Quantum Mechanics (F) ___
- PHYS 152 Optoelectronics (*) ___
- PHYS 155 Solid State Physics (W) ___
- PHYS 156 Applications of Solid State Physics (S) ___
- PHYS 160 Practical Electronics (S) ___
- PHYS 171 General Relativity, Black Holes and Cosmology (F) ___
- PHYS 180 Biophysics (S) ___
- EE 101/L Introduction to Electronic Circuits (FW) ___
- EE 103 Signals and Systems (FS) ___
- EE 115 Intro to Micro-Electro-Mechanical-Systems Design (*) ___
- EE 130 Introduction to Optoelectronics and Photonics (F) ___
- EE 145 Properties of Materials (F) ___
- EE 154 Feedback Control Systems (F) ___
- EE 171 Analog Electronics (S) ___
- EE 172 Advanced Analog Circuits (F) ___
- EE 178 Device Electronics (S) ___

Note: Other courses may be used to satisfy the elective requirement with approval from a faculty advisor.

**Laboratories:**
- PHYS 133 Intermediate Laboratory (FW) ___
- PHYS 134 Physics Advanced Laboratory (WS) ___

### COMPREHENSIVE REQUIREMENT

**Senior Thesis on an applied physics topic ___**

**Requirements for Disciplinary Communication (DC):** Students satisfy this requirement by successfully completing Physics 182 and the senior thesis. The DC requirement MUST be completed at UCSC.