**B.S. Physics**

**Suggested semester:**

- **Freshman (1st year):**
  - Fall (F): MATH 113 Calculus II (4.0 hr)
  - Winter (W): MATH 213 + 215 Linear Alg +lab (2+1 hr)
  - Spring (Sp): PHYS 121 Mechanics

- **Sophomore (2nd year):**
  - Fall (F): MATH 302 Math for Eng. 1 (4.0 hr)
  - Winter (W): PHYS 123 Waves, optics, thermo
  - Spring (Sp): PHYS 220 Elec & Mag

- **Junior (3rd year):**
  - Fall (F): PHYS 318 Math Phys
  - Winter (W): PHYS 319 Math Phys
  - Spring (Sp): PHYS 225 Intro to Expt. Phys (2.0 hr) Take with 220 if possible

- **Senior (4th year):**
  - Fall (F): PHYS 245 Experiment in Contemp Phys (2.0 hr)
  - Winter (W): PHYS 441 Elec & Mag 1
  - Spring (Sp): PHYS 451 Quantum 1

**Notes:**
1. Math 112 (Calculus I) preparation is assumed in high school. If you studied differentiation and integration in high school, move on to Math 113.
2. If you want a more formal versus applied math preparation, and perhaps a math minor, take the math sequence on the right. It requires 1-2 more hours than the left track. Both tracks are good.
3. Senior Thesis is required; join research group as early as possible. Credit in Sr. year in 498R.
4. Physics 416, Writing in Physics, can replace Engl 316, and can help you write your thesis. Take it when your research is essentially complete.
5. Color code: blue = math & CS, orange = introductory sequence, purple = lab, yellow = careers, green = computational, red = upper level.

**Other optional advanced courses (Prereqs):**
- 399R Internship
- 427 Astrophysics (instructor’s consent)
- 461, 561 Acoustics (123, Math 334)
- 513R Special topics
- 545 Plasma Physics (321, 441)
- 571 Lasers and Atoms (451, 471)
- 581 Solid State Physics (222)
- 583 Nanostructures & Surfaces (222)
- 587 Semiconductor devices (581)
- 588 Electron Microscopy
- 589 Semiconductor devices (581)
- 591.2 Math. Physics (Math 318, 334)
- Other courses rec’ed by alumni
  - Stat 201 (Stat for Eng. & Sci)
  - Math 352 (Complex Analysis)
  - Math 410 (Numerical Methods)
  - Mech Eng 273 (Intro to Sci Comp & Comp Aid Eng)