B.S. Physics Education

### Suggested semester:

**Freshman**
1. MATH 112 (or AP) Calculus I
2. MATH 113 Calculus II (4.0hr)

**Sophomore**
3. MATH 302 Math for Eng. I (4.0hr)
4. MATH 303 Math for Eng. 2 (4.0hr)

**Junior**
5. MATH 334 Diff. Equations (3.0hr)

**Senior**
6. PHYS 310 Inquiry: Electricity (3.0hr) Prereq: PHYS 105 or PHYS 120

**Notes:**
1. Please visit the teaching majors advisor early to ask questions.
2. Some teaching students prefer to put in more effort and get the B.S. in Physics while completing the teaching courses needed to certify. Another option is to get the B.S. in Applied Physics, and select education classes as your emphasis. These options give them the option to teach, continue to graduate school or work in industry. It is not necessary to get a teaching degree to certify to teach.
3. Color code: blue = math, orange = lower level lecture, purple = lab, yellow = careers, green = education, red = other physics classes

### Required Courses
- PHYS 121 Mechanics
- PHYS 123 Waves, optics, thermo
- PHYS 225 Intro to Expt. Phys (2.0 hr) Take with 220 if possible. Rec: CS 142 or programming experience
- PHYS 220 Elec & Mag
- PHYS 222 Modern Phys
- PHYS 240 Sci Apparatus Design, Fab (2.0 hr)

### Prerequisite Courses
- PHYS 191 Phys Careers & Research (0.5 hr)
- PHYS 225 Intro to Expt. Phys (2.0 hr) Take with 220 if possible. Rec: CS 142 or programming experience
- PHYS 311 Inquiry: Electricity (3.0hr) Prereq: PHYS 106 or PHYS 220

### Concurrent Courses
- PHYS 301 Desc. Astronomy
- PHYS Elective See note to the right
- PHYS Elective See note to the right

### Electives
- Elective Group A: Complete up to 3 hrs from the following: Physcs 137, 167, 310, 311, 313R, Phil 423R.
- Elective Group B: Complete at least 6 hrs from any 300+ physics courses, not including 310, 311, 399R. Phys 321, 461, and 471 are highly recommended.

### Other Highly Recommended Courses
- PhySci 276 Exploration of Teaching (4.0 hr)
- Phys 230 (Computational Physics 1)
- Chem 105 (General Chem 1)
- Chem 106 (General Chem 2)

### Required Prerequisite Courses
- PHYS 191 Phys Careers & Research (0.5 hr)
- PHYS 225 Intro to Expt. Phys (2.0 hr) Take with 220 if possible. Rec: CS 142 or programming experience

### Concurrent Prerequisite Courses
- PHYS 311 Inquiry: Electricity (3.0hr) Prereq: PHYS 106 or PHYS 220

### Concurrent Elective Courses
- PHYS 310 Inquiry: Electricity (3.0hr) Prereq: PHYS 105 or PHYS 121
- PHYS Elective See note to the right
- PHYS Elective See note to the right

### Required Electives
- ScEd 375 Adolescence
- ScEd 353 Multicultural Ed. (2.0 hr)

### Required Elective Courses
- ScEd 375 Adolescence
- CPSE 402 Ed Disabilities (2.0 hr)
- PhySci 476R Explorations in Education Technology (1.0 hr each). Take these anytime between PhySci 276 and PhySci 476R/496R