

BACHELOR OF SCIENCE ENGINEERING PHYSICS

GENERAL EDUCATION Courses that are **required** are in bold type.

| | |
|--|-------|
| REQUIRED HOURS | 48-49 |
| Communication | 8 |
| ENGL 1113 English Composition I | |
| ENGL 1213 English Composition II | |
| COMM 1312 Basic Speech | |
| Mathematics | 3 |
| MATH 1143 Math Concepts | |
| MATH 1513 College Algebra OR a higher numbered math course | |
| Computer Applications/Technology | 2 |
| COMSC 1022 Computers & Information Access | |
| TECH 1122 Technology & Society | |
| Economics | 3 |
| ECONO 1113 Contemporary Economics | |
| Health & Physical Education | 3 |
| HPER 1133 Wellness Concepts & Exercise Applications (includes 1 hr lab) | |
| Natural Sciences | 8 |
| BIOL 1004 Biological Concepts | |
| SCI 1514 Concepts of Physical Science | |
| SCI 1614 Science & the Environment | |
| ASTRO 1904 Astronomy | |
| GEOL 1934 Physical Geology | |
| Fine Arts & Humanities | 6 |
| ART 1222 Art Survey | |
| LIT 2412 Introduction to Literature | |
| MUSIC 1012 Introduction to Music I | |
| PHILO 1452 Introduction to Philosophy | |
| U.S. History & Government | 6 |
| HIST 1063 U.S. History | |
| POLSC 1103 American Government & Politics | |
| International & Cultural Studies | 6-7 |
| HIST 1033 World History | |
| GEOG 1103 World Cultural Geography | |
| POLSC 1153 World Relations & Politics | |
| Foreign Language (4 hr/includes 3 hr class & 2 hr lab) | |
| Behavioral/Social Science | 3 |
| PSYCH 1003 General Psychology | |
| SOCIO 1003 Introduction to Sociology | |

Engineering Physics Major Code No. 153

| | |
|--|-------------|
| Required Courses | 48-50 hours |
| PHY 2145 General Physics I | |
| PHY 2155 General Physics II | |
| PHY 2203 Rigid Body Mechanics | |
| PHY 2213 Strength of Materials | |
| PHY 3413 Analog Electronics | |
| OR PHY 3544 Digital Electronics | |
| PHY 3112 Experimental Techniques | |
| PHY 3311 Modern Physics Lab | |
| PHY 3403 Modern Physics for Engineers | |
| PHY 3501 Physics Seminar | |
| PHY 3563 Thermodynamics | |
| PHY 3603 Mechanics | |
| PHY 4644 Electricity & Magnetism I | |
| PHY 4663 Electricity & Magnetism II | |
| PHY 4723 Quantum Mechanics | |
| Seven hours selected from: | |
| PHY 3013 Materials Science | |
| PHY 3424 Optics | |
| PHY 3573 Heat Transfer | |
| PHY 3633 Fluid Mechanics | |
| PHY 4001 Indiv Study in Physics (Physics Research) | |
| OR PHY 4011 Physics Seminar | |
| Other Requirements | 35-36 |
| *MATH 1715 College Algebra & Trigonometry | |
| MATH 1834 Calculus I | |
| MATH 2834 Calculus II | |
| MATH 3834 Calculus III | |
| MATH 4213 Differential Equations | |
| CHEM 1203 General Chemistry I | |
| CHEM 1252 General Chemistry I Lab | |
| CHEM 1303 General Chemistry II | |
| CHEM 1352 General Chemistry II Lab | |
| COMSC 1033 Computer Science I | |
| A 2-3 semester hour course in engineering graphics (e.g., TECH 1203 Engineering Drafting or TECH 3203 Computer Aided Drafting I) | |
| Electives to bring total to | 124 |
| <i>*Students who have a strong high school background in mathematics are encouraged to take CLEP examinations and complete additional courses in mathematics. The mathematics requirements above satisfy a minor in mathematics.</i> | |
| REGULATIONS PERTAINING TO GRADUATION | |
| Minimum credit hours for graduation | 124 |
| Minimum credit hours in the liberal arts & sciences | 55 |
| Minimum credit hours in upper-division (3000/4000 courses)..... | 40 |
| Minimum credit hours (3000/4000 courses) in major completed at SWOSU | 8 |
| Minimum credit hours at SWOSU (including last 8)..... | 30 |
| Minimum Grade Point Average in all coursework | 2.00 |
| Minimum Grade Point Average in major | 2.00 |

ENGINEERING PHYSICS (BS) – (CODE 153)
Suggested Course Sequence

| FIRST YEAR | | SECOND YEAR | |
|---|---|--|---|
| FIRST SEMESTER | SECOND SEMESTER | FIRST SEMESTER | SECOND SEMESTER |
| 1011 Freshman Orient*1 1113 English Comp I.....3 1203 Gen Chemistry I.....3 1252 Gen Chemistry I Lab...2 1715 Algebra & Trig.....5 OR 1834 Calculus I.....4 2011 Intro. Engineering.....1 | 1213 English Comp II.....3 1303 Gen Chemistry II.....3 1352 Gen Chemistry II Lab...2 1834 Calculus I.....4 OR 2834 Calculus II.....4 2145 Gen Physics I.....5 2145L Gen Physics I Lab | 1033 Computer Science I.....3 2155 Gen Physics II.....5 2155L Gen Physics II Lab 2203 Rigid Body Mechanics...3 2834 Calculus II.....4 OR 3834 Calculus III.....4 Gen Educ Crse.....3 English Prof. Exam** | 2213 Strength of Materials...3 3311 Mod Phys Eng Lab.....1 3403 Mod Phys Engineers....3 3834 Calculus III.....4 OR 4213 Diff Eq.....3 Gen Educ Crses.....6 |
| Total:.....14-15 | Total:.....17 | Total:.....18 | Total:.....16-17 |

| THIRD YEAR | | FOURTH YEAR | |
|--|--|---|--|
| FIRST SEMESTER | SECOND SEMESTER | FIRST SEMESTER | SECOND SEMESTER |
| 4644 Electricity & Mag I.....4 4644L Elect & Mag I Lab 4723 Quantum Mechanics....3 Gen Educ Crses.....9 | 3501 Physics Seminar.....1 3544 Digital Electronics.....4 OR 3413 Analog Elect.....3 3544L Digital Elect Lab OR 3413L Anal Elect Lab 3563 Thermodynamics.....3 4663 Electricity & Mag II...3 4213 Differential Equations...3 OR Math Elective.....3 Gen Educ Crse.....3 | 1203 Engineering Drafting...3 OR 3203 Comp Aid Drft...3 3112 Exper Techniques.....2 Physics Elective.....3-4 Gen Educ Crses.....6-7 | 3603 Mechanics.....3 Physics Elective.....3-4 Gen Educ Crses.....7-9 Free Electives.....0-3 |
| Total:.....16 | Total:.....16-17 | Total:.....14-16 | Total:.....13-16 |

*First time entering Freshmen need to take 1001 Freshman Orientation.

**If applicable. See English Proficiency Program under the General Academic Information Section.