PHYSICS DEGREES:

**Bachelor of Science (BS) in Physics**
(104 credits)

*The Bachelor of Science program is designed primarily for students preparing for graduate study in physics and for students planning a professional career in Physics*

**Required Courses (98 credits)**
PHYS 151 General Physics I (4)
PHYS 152 General Physics II (4)
PHYS 153 General Physics III (4)
PHYS 161 Mechanics Lab (1)
PHYS 162 Heat and Optics Lab (1)
PHYS 163 Instrumentation Lab I (1)
PHYS 164 Instrumentation Lab II (1)
PHYS 221 General Physics IV (4)
PHYS 321 Advanced Physics Lab I (3)
PHYS 322 Advanced Physics Lab II (3)
PHYS 361 Classical Mechanics I (4)
PHYS 362 Classical Mechanics II (4)
PHYS 371 Intro to Quantum Physics (4)
PHYS 381 Atomic Physics (4)
PHYS 401 Electromagnetism I (4)
PHYS 402 Electromagnetism II (4)
PHYS 403 Electromagnetism III (4)
CHEM 151 General Chemistry (5)
CHEM 152 General Chemistry (5)
CHEM 153 General Chemistry (5)
MATH 161 Calculus I (5)
MATH 162 Calculus II (5)
MATH 163 Calculus III (5)
MATH 241 Calculus IV (5)
MATH 342 Topics in Applied Analysis II (5)
MATH 347 Intro to Differential Equations (4)

**Electives (6 credits minimum)**
PHYS 363 Special Relativity (4)
Or any 400-level physics courses except PHYS 497 may be selected as electives.

**Bachelor of Arts (BA) in Physics**
(45 credits)

*The Bachelor of Arts degree allows the student to acquire a physics degree with strong emphasis in one or more related fields of study. The degree is ideal preparation for graduate work in such areas as geophysics, biophysics and physical chemistry. Physics graduates also commonly enter graduate schools in engineering fields.*

**Required Courses (20 credits)**
PHYS 151 General Physics I (4)
PHYS 152 General Physics II (4)
PHYS 153 General Physics III (4)
PHYS 161 Mechanics Lab (1)
PHYS 162 Heat and Optics Lab (1)
PHYS 163 Instrumentation Lab I (1)
PHYS 164 Instrumentation Lab II (1)
PHYS 221 General Physics IV (4)

**Electives (25 credits)**
Select in consultation with advisor; courses are subject to approval by the Physics Department.

*Note: The above major requires the completion of a minor*

**University Foreign Language requirement:** Two years of a single high school foreign language or one year of a single college level foreign language is required.

*See other side for Bachelor of Arts in Education (BAE) and Physics Minor requirements*
PHYSICS DEGREES:

Bachelor of Arts in Education (BAE) in Physics/Secondary Education
(69 credits)

This major satisfies the endorsement for grades 5-12

Note: See the Education Department for prerequisites, core requirements and the Secondary Education Core (43 credits)

Required Courses (51 credits)
CHEM 151 General Chemistry (5)
CHEM 152 General Chemistry (5)
PHYS 151 General Physics I (4)
PHYS 152 General Physics II (4)
PHYS 153 General Physics III (4)
PHYS 161 Mechanics Lab (1)
PHYS 162 Heat and Optics Lab (1)
PHYS 163 Instrumentation Lab I (1)
PHYS 164 Instrumentation Lab II (1)
PHYS 221 General Physics IV (4)
PHYS 371 Intro to Quantum Physics (4)
PHYS 390 Physics Teaching Methods (1)
MATH 161 Calculus I (5)
MATH 162 Calculus II (5)
MATH 163 Calculus III (5)
SCED 390 Secondary Science Teaching Methods (1)

Electives (18 credits)
Choose from any 300 and 400 level physics courses, except PHYS 497

Note: The above major does not require the completion of a minor. Students are encouraged to complete a secondary endorsement in at least one other subject area.

PHYSICS MINORS:

Physics Minor (20 credits)

Required Courses:
PHYS 151 General Physics I (4)
PHYS 152 General Physics II (4)
PHYS 153 General Physics III (4)
PHYS 161 Mechanics Lab (1)
PHYS 162 Heat and Optics Lab (1)
PHYS 163 Instrumentation Lab I (1)
PHYS 164 Instrumentation Lab II (1)
PHYS 221 General Physics IV (4)

Physics/Secondary Minor (24 credits)

This minor satisfies the endorsement for grades 5-12

Required Courses:
PHYS 151 General Physics I (4)
PHYS 152 General Physics II (4)
PHYS 153 General Physics III (4)
PHYS 161 Mechanics Lab (1)
PHYS 162 Heat and Optics Lab (1)
PHYS 163 Instrumentation Lab I (1)
PHYS 164 Instrumentation Lab II (1)
PHYS 221 General Physics IV (4)
PHYS 495 Internship (4)