Second Semester
3 - BIOL 1110 Principles of Biology II
3 - ENGL 1030 Composition and Rhetoric
4 - MATH 1080 Calculus of One Variable II
3 - Computer Science Requirement
15

Sophomore Year
First Semester
4 - CH 1010 General Chemistry
4 - MATH 2060 Calculus of Several Variables
1 - MATH 2500 Intro. to Mathematical Sciences
3 - PHYS 2070 General Physics I
1 - PHYS 2090 General Physics I Lab.
3 - Arts and Humanities (Non-Lit.) Requirement
16

Second Semester
4 - CH 1020 General Chemistry
3 - MATH 3110 Linear Algebra
3 - PHYS 2080 General Physics II
1 - PHYS 2100 General Physics II Lab.
15

Junior Year
First Semester
3 - CH 2230 Organic Chemistry
1 - CH 2270 Organic Chemistry Lab.
3 - MATH 3190 Introduction to Proof
3 - Advanced Writing Requirement
3 - Arts and Humanities (Literature) Requirement
16

Second Semester
3 - CH 2240 Organic Chemistry
1 - CH 2280 Organic Chemistry Lab.
3 - MATH 4400 Linear Programming
3 - Mathematical Sciences Requirement
3 - Oral Communication Requirement
16

Senior Year
First Semester
3 - MATH 4000 Theory of Probability
3 - MATH 4530 Advanced Calculus I
3 - Animal or Plant Diversity Requirement
3 - Capstone Experience
3 - Social Science Requirement
15

Second Semester
3 - MATH 4120 Introduction to Modern Algebra
3 - MATH 4540 Advanced Calculus II
1 - MATH 4920 Professional Development
3 - Biological Sciences Requirement
3 - Capstone Experience
13

121 Total Semester Hours

Notes:
1Select from ENGL 3040, 3120, 3140 or 3150; or the cluster of courses AS 3090, 3100, 4090 and 4100; or the cluster of courses ML 3010, 3020, 4010, and 4020.
2Any 4000-level MATH or STAT course approved by advisor.
3See General Education Requirements.
4BCHM 3010, GEN 3020/3030, MICR 3050, or any 3000-4000 level BIOL course.
5BIOL 3020, 3030, 3040, or 3050.
6May be satisfied by (1) completion of six credits of MATH 4820, (2) completion of six credits of MATH 4910 or an approved substitution; or (3) completion of three credits of MATH 4500 and three credits approved by advisor selected from MATH 4030, 4060, 4070, 4080, 4100, 4100, 4130, 4140, 4350, 4410, 4420, 4600, 4820, 4910.
7See General Education Requirements.
8BIOL 3020, 3030, 3040, or 3050.
9See General Education Requirements. Six of these credit hours must also satisfy the Cross-Cultural Awareness and Science and Technology in Society Requirements.
10Any 4000-level MATH or STAT course approved by advisor.
11See General Education Requirements.
12See General Education Requirements. Six of these credit hours must also satisfy the Cross-Cultural Awareness and Science and Technology in Society Requirements. The Medical Colleges Admissions Test (MCAT) includes questions on statistics.
13Elective hours may be used toward satisfying the requirements of a minor.
14BCHM 3010 may be substituted.
BIOMEDICINE

CONCENTRATION

The Microbiology curriculum with a Biomedicine Concentration is recommended for students planning postgraduate programs. It is especially suited for students interested in the study of infectious diseases.

Freshman Year

First Semester
1 - BIOL 1010 Frontiers in Biology I
5 - BIOL 1100 Principles of Biology I
4 - CH 1010 General Chemistry
4 - MATH 1060 Calculus of One Variable I
3 - Oral Communication Requirement
17

Second Semester
5 - BIOL 1110 Principles of Biology II
4 - CH 1020 General Chemistry
3 - ENGL 1030 Composition and Rhetoric
3 - Mathematical Sciences Requirement
15

Sophomore Year

First Semester
3 - CH 2230 Organic Chemistry
1 - CH 2270 Organic Chemistry Lab.
3 - ENGL 3150 Scientific Writing and Comm.
3 - Arts and Humanities (Literature) Requirement
3 - Social Science Requirement
3 - Elective
16

Second Semester
3 - BCHM 3050 Essential Elements of Biochem
3 - CH 2240 Organic Chemistry
1 - CH 2280 Organic Chemistry Lab.
3 - GEN 3000 Fundamental Genetics
4 - MICR 3050 General Microbiology
3 - Arts and Humanities (Non-Lit.) Requirement
17

Junior Year

First Semester
3 - BIOL 4100 Cell Biology
2 - BIOL 4620 Cell Biology Lab.
3 - MICR 4010 Microbial Diversity and Ecology
3 - PHYS 2070 General Physics I
1 - PHYS 2090 General Physics I Lab.
8 - Biomedicine Requirement
15

PHYSICS

Physics, the most fundamental of the natural sciences, forms the basis of study upon which the other branches of science are founded. Physics is concerned with the fundamental behavior of matter and energy. Classical physics encompasses the fields of mechanics, heat and thermodynamics, electricity and magnetism, acoustics and optics. Modern physics is concerned with the study of atoms and molecules, atomic nuclei, elementary particles and the properties of liquids, crystalline solids, and other materials, as well as the areas of relativity, cosmology, and the large-scale structure of the universe. The undergraduate Physics curricula provide students with a strong background in the classical areas of physics, as well as an introduction to the more important aspects of modern physics.

Second Semester
3 - MICR 4120 Bacterial Physiology
2 - MICR 4500 Advanced Micro Lab I
3 - PHYS 2080 General Physics II
1 - PHYS 2100 General Physics II Lab.
3 - Social Science Requirement
3 - Elective
15

Senior Year

First Semester
3 - MICR 4140 Basic Immunology
3 - MICR 4150 Microbial Genetics
3 - MICR 4160 Introductory Virology
3 - MICR 4510 Advanced Micro Lab II
3 - Biomedicine Requirement
14

Second Semester
2 - BIOL 4930 Senior Seminar or
2 - MICR 4930 Senior Seminar
3 - MICR 4110 Pathogenic Bacteriology
3 - MICR 4120 Bacterial Physiology
3 - MICR 4140 Basic Immunology
3 - MICR 4150 Microbial Genetics
3 - MICR 4160 Introductory Virology
3 - Elective
16

125 Total Semester Hours

PHYSICS

Bachelor of Arts

The Bachelor of Arts in Physics program is ideal for students interested in acquiring a broad-based liberal education that includes a strong and solid understanding of either science or a broad exposure to engineering with a strong physics foundation.

Double Major in Physics/Science Teaching—Physics

The Bachelor of Arts Degree in Physics and Science Teaching—Physics prepares students for teaching physics on the secondary school level and for graduate studies in physics. See page 106 for the curriculum.

Note: To receive a double major in Physics and Science Teaching—Physics, the student must complete a change-of-program form to declare both majors.

Freshman Year

First Semester
4 - CH 1010 General Chemistry
3 - ENGL 1030 Composition and Rhetoric
4 - MATH 1060 Calculus of One Variable I
3 - PHYS 1220 Physics with Calculus I
1 - PHYS 1240 Physics Lab. I
15

Second Semester
4 - CH 1020 General Chemistry
4 - MATH 1080 Calculus of One Variable II
3 - PHYS 2210 Physics with Calculus II
1 - PHYS 2230 Physics Lab. II
3 - Arts and Humanities (Non-Lit.) Requirement
15

Sophomore Year

First Semester
4 - MATH 2060 Calculus of Several Variables
3 - PHYS 2220 Physics with Calculus III
2 - PHYS 3000 Introduction to Research
3 - PHYS 3250 Experimental Physics I
4 - Modern Language Requirement
16

Second Semester
4 - MATH 2080 Intro. to Ordinary Diff. Equations
3 - PHYS 3110 Intro. to Meth. of Theoretical Phys.
4 - Modern Language Requirement
3 - Oral Communication Requirement
14

Junior Year

First Semester
3 - PHYS 3150 Intro. to Computational Physics
3 - PHYS 3170 Intro. to Modern Physics
3 - Elective
3 - Minor Requirement
15

Second Semester
3 - PHYS 3220 Mechanics II
3 - PHYS 4650 Thermodynamics and Statistical Mechanics
3 - Modern Language Requirement
3 - Minor Requirement
3 - Social Science Requirement
15