

College of Sciences and Mathematics

STEWART W. SCHNELLER, *Dean*
 LAWRENCE C. WIT, *Associate Dean for Academic Affairs*
 MARIE W. WOOTEN, *Associate Dean for Research*
 OVERTOUN JENDA, *Associate Dean for Minority Affairs*

THE COLLEGE OF SCIENCES AND MATHEMATICS provides programs in the physical sciences, life sciences and mathematics at the undergraduate and graduate levels. The College also offers scientific and mathematical service courses for students enrolled in all of the other colleges and schools. The College includes the departments of Biological Sciences, Chemistry, Discrete and Statistical Sciences, Geology and Geography, Mathematics and Physics. The Arboretum and the Leach Science Center are also included in the College of Sciences and Mathematics.

Undergraduate Degrees

- Four-year bachelor's degree programs are offered in two areas:
 - Departmental curricula are available in biomedical sciences, botany, chemistry, biochemistry, geography, geology, laboratory and medical technology, microbiology, molecular biology, marine biology, mathematics, applied mathematics, physics and zoology.
 - Pre-professional curricula are offered in pre-dentistry, pre-medicine, pre-optometry, pre-physical therapy, pre-pharmacy and pre-veterinary medicine.

Embodied in these curricula are the requirements of the University Core Curriculum.

- Admission — The academic requirements and demands on majors in sciences and mathematics necessitate a high school preparation of high intellectual quality. The following courses are recommended as minimum preparation: English, four units; mathematics (including algebra, geometry, trigonometry and pre-calculus), four units; chemistry, one unit; biology, one unit; history, literature, social science, two or three units. Both physics and foreign language are highly recommended.

Many COSAM curricula require students to begin with MATH 1610. Students not prepared for MATH 1610 must first take a lower-numbered course. See adviser for details.

Transfers from on-campus may declare a major in the College of Sciences and Mathematics if they: (1) have a cumulative Auburn GPA of at least 2.0 (on all work attempted) and (2) have completed at least 10 hours of Auburn University course work in the desired major with at least a 2.0 GPA in all such courses. Courses in the major are those carrying the appropriate prefix(es) of the intended curriculum. Students not meeting these standards may enroll in the Undeclared Sciences and Mathematics (UNSM) curriculum if they have not reached senior standing. Students in the UNSM curriculum may declare a Sciences and Mathematics major after satisfying the above requirements. A student who enters the UNSM curriculum because he or she is not qualified to declare a major can remain in UNSM for a maximum of one year or until senior standing is reached. After this, if the student is still not qualified to declare a major, he or she will be disenrolled from the College of Sciences and Mathematics.

Graduate Degrees

Master of Science and Doctor of Philosophy degrees are offered in the College of Sciences and Mathematics. Degree programs are described in this Bulletin.

Web Page

Further information about the College of Sciences and Mathematics can be found at: <http://www.auburn.edu/cosam/>

Minors

MATHEMATICS MINOR

18 semester hours is Minor

| Courses required: | | Cr. Hr. |
|---|------------------------------|----------|
| MATH 2650 | Differential Equations | 3 |
| MATH 2660 | Linear Algebra | 3 |
| 4 additional courses labeled MATH at the 6000 level | | 3 (each) |

MATH 2650 and/or MATH 2660 may be replaced by any course at the 6000 level which is labeled MATH upon departmental approval. In addition, MATH 3100 may replace any one of the above courses.

PHYSICS MINOR

15 semester hours in Minor

| Courses required: | | Cr. Hr. |
|-------------------|---|---------|
| PHYS 2000 | Introductory Quantum Physics and Relativity | 3 |
| PHYS 2100 | Intermediate Mechanics | 3 |
| PHYS 3100 | Intermediate Electricity & Magnetism | 3 |
| PHYS 3200 | Statistical Thermodynamics | 3 |
| PHYS 4100 | Fundamentals of Quantum Mechanics | 3 |

General Sciences and Mathematics Curriculum (UNSM)

This curriculum is primarily for freshmen who have not decided on a specific major field of study and for transfer students having deficiencies which preclude their acceptance in a degree program. Freshmen entering this curriculum must declare a major by the end of their first year. Transfer students must complete a specific approved program to clear their admission to a major field of study.

The General Curriculum (UNSM)

| FR | F | S | | F | S |
|------|------|------|---------------------------------------|-----------|-----------|
| MATH | 1610 | 1620 | Calculus I & II | 4 | 4 |
| ENGL | 1100 | 1120 | English Composition I & II | 3 | 3 |
| | | | Science | 4 | 4 |
| | | | Core Social Science Group 1 & 2 | 3 | 3 |
| | | | Career Exp | 2 | ** |
| | | | Elective | ** | 2 |
| | | | | 16 | 16 |

TOTAL HOURS — 32

Departmental Curricula

Departmental curricula leading to the Bachelor of Science degree include botany, chemistry, biochemistry, biomedical sciences, geography, geology, microbiology, molecular biology, marine biology, laboratory and medical technology, mathematics, applied mathematics, physics and zoology.

Botany

The botany major is for students interested in various careers in the plant sciences. Students may pursue either the Ecology and Evolution Track or the Cellular and Molecular Track

Curriculum in Botany/

Ecology and Evolution Track (BTNY, ECEV)

| FR | F | S | | F | S |
|-----------|------|-------------|--|-----------|-----------|
| BIOL | 1020 | | Principles of Biology | 4 | ** |
| BIOL | | 1030 | Organismal Biology | ** | 4 |
| ENGL | 1100 | 1120 | English | 3 | 3 |
| MATH | 1610 | 1620 | Calculus I & II | 4 | 4 |
| CHEM | 1030 | 1040 | Fundamentals of Chemistry I & II | 3 | 3 |
| CHEM | 1031 | 1041 | Fundamentals of Chemistry I & II Lab | 1 | 1 |
| | | | | 15 | 15 |
| SO | | | | | |
| ENGL | 2200 | 2210 | Great Books I & II | 3 | 3 |
| | | | Core History | 3 | 3 |
| | | | Core Social Science | 3 | 3 |
| | | | Core Fine Arts | 3 | ** |
| CHEM | 2070 | 2080 | Organic Chemistry I & II | 3 | 3 |
| CHEM | 2071 | 2081 | Organic Chemistry I & II Lab | 1 | 1 |
| BIOL | | 3000 | Genetics | ** | 4 |
| | | | | 16 | 17 |

| | | | | | |
|-------------|-------------|-------------|--|-----------|-----------|
| JR | | | | | |
| PHYS | 1500 | 1510 | General Physics I & II & Labs (1501, 1511) | 4 | 4 |
| | | | Core Philosophy | ** | 3 |
| STAT | | 3010 | Statistics for Engr. & Sci. | ** | 3 |
| BIOL | 3030 | | Evolution & Systematics | 3 | ** |
| BIOL | 3100 | | Plant Biology | 3 | ** |
| BIOL | 3101 | | Plant Biology Lab | 1 | ** |
| BIOL | | 3060 | Principles of Ecology | ** | 4 |
| | | | Elective | 4 | 3 |
| | | | | 15 | 17 |
| SR | | | | | |
| BIOL | 4300 | | Plant Anatomy & Development | 4 | ** |
| BIOL | 4950 | | Undergraduate Seminar | 1 | ** |
| BIOL | | 6120 | Systematic Botany | ** | 4 |
| BIOL | 6130 | | Plant Physiology | 4 | ** |
| BIOL | | 6140 | Plant Ecology | ** | 4 |
| | | | Biology Elective | 4 | 4 |
| | | | | 13 | 12 |

TOTAL HOURS — 120

Biology Elective: see adviser for approved course listing.
 Students must either pass the computer competency test or take COMP 1000 as one of their electives.

**Curriculum in Botany/
 Cellular and Molecular Track (BTNY, CMLB)**

| | | | | | | |
|-------------|-------------|-------------|----------|--|-----------|-----------|
| FR | | F | S | | F | S |
| BIOL | 1020 | | | Principles of Biology | 4 | ** |
| BIOL | | 1030 | | Organismal Biology | ** | 4 |
| ENGL | 1100 | 1120 | | English | 3 | 3 |
| MATH | 1610 | 1620 | | Calculus I & II | 4 | 4 |
| CHEM | 1030 | 1040 | | Fundamentals of Chemistry I & II | 3 | 3 |
| CHEM | 1031 | 1041 | | Fundamentals of Chemistry I & II Lab | 1 | 1 |
| | | | | | 15 | 15 |
| SO | | | | | | |
| ENGL | 2200 | 2210 | | Great Books I & II | 3 | 3 |
| | | | | Core Social Science Group 1 & 2 | 3 | 3 |
| | | | | Core Fine Arts | 3 | ** |
| | | | | Core History | 3 | 3 |
| CHEM | 2070 | 2080 | | Organic Chemistry I & II | 3 | 3 |
| CHEM | 2071 | 2081 | | Organic Chemistry I & II Lab | 1 | 1 |
| BIOL | 3000 | | | Genetics | ** | 4 |
| | | | | | 16 | 17 |
| JR | | | | | | |
| PHYS | 1500 | 1510 | | General Physics I & II Labs (1501, 1511) .. | 4 | 4 |
| | | | | Core Philosophy | ** | 3 |
| BIOL | 3100 | | | Plant Biology | 3 | ** |
| BIOL | 3101 | | | Plant Biology Lab | 1 | ** |
| BIOL | | 4100 | | Cell Biology | ** | 3 |
| BIOL | 3200 | | | General Microbiology | 4 | ** |
| | | | | Elective | 4 | 3 |
| | | | | | 16 | 13 |
| SR | | | | | | |
| BIOL | 4300 | | | Plant Anatomy & Development | 4 | ** |
| BIOL | | 4220 | | Molecular Genetics | ** | 3 |
| BIOL | 4950 | | | Undergraduate Seminar | 1 | ** |
| BIOL | | 6120 | | Systematic Botany | ** | 4 |
| BIOL | | 6130 | | Plant Physiology | ** | 4 |
| | | | | Biology Elective | 4 | ** |
| BCHE | 6180 | 6190 | | Biochemistry I & II | 3 | 3 |
| BCHE | 6181 | 6191 | | Biochemistry I & II Lab | 1 | 1 |
| | | | | | 13 | 15 |

TOTAL HOURS — 120

Biology Electives: see adviser for approved course listing.
 Students must either pass the computer competency test or take COMP 1000 as one of their electives.

Chemistry

These curricula, accredited by the American Chemical Society, prepare students for careers in pure and applied chemistry with a dual emphasis on classroom and laboratory experience. A flexible senior year allows students to tailor the program to individual professional goals. Graduates are prepared to enter the profession immediately or continue for advanced degree programs. The senior research program introduces students to modern advanced techniques and approaches to chemical research in an area of their interest by having them complete an individual research project in conjunction with a faculty adviser.

Curriculum in Chemistry (CHEM)

| | | | | | | |
|-------------|-------------|-------------|----------|--|-----------|-----------|
| FR | | F | S | | F | S |
| ENGL | 1100 | 1120 | | English Composition I & II | 3 | 3 |
| MATH | 1610 | 1620 | | Calculus I & II | 4 | 4 |
| | | | | Core History | 3 | 3 |
| CHEM | 1110 | 1120 | | General Chemistry I & II | 3 | 3 |
| CHEM | 1111 | 1121 | | General Chemistry Lab I & II | 1 | 1 |
| CHEM | 1200 | | | Chemical Application | 1 | ** |
| | | | | | 15 | 14 |
| SO | | | | | | |
| PHYS | 1600 | 1610 | | Engr Physics I & II & Labs (1601, 1611) | 4 | 4 |
| ENGL | 2200 | | | Great Books I | 3 | ** |
| MATH | 2630 | | | Calculus III | 4 | ** |
| MATH | | 2650 | | Linear Differential Equations | ** | 3 |
| CHEM | 2070 | 2080 | | Organic Chemistry I & II | 3 | 3 |
| CHEM | 2071 | 2081 | | Organic Chemistry Lab I & II | 1 | 1 |
| CHEM | 2200 | | | Chemical Application II | 1 | ** |
| CHEM | | 3050 | | Analytical Chemistry | ** | 3 |
| CHEM | | 3051 | | Analytical Chemistry Lab | ** | 1 |
| | | | | | 16 | 15 |
| JR | | | | | | |
| ENGL | 2210 | | | Great Books II | 3 | ** |
| | | | | Core Social Science I | ** | 3 |
| MATH | 2660 | | | Topics in Linear Algebra | 3 | ** |
| BCHE | 6180 | | | Biochemistry | 3 | ** |
| BCHE | 6181 | | | Biochemistry Lab | 1 | ** |
| CHEM | | 3000 | | Chemical Literature | ** | 1 |
| CHEM | 3200 | | | Chemical Application III | 1 | ** |
| CHEM | | 6040 | | Computational Chemistry | ** | 4 |
| CHEM | 6070 | 6080 | | Physical Chemistry I & II | 3 | 3 |
| CHEM | 6071 | 6081 | | Physical Chemistry Lab I & II | 1 | 1 |
| | | | | Elective | ** | 3 |
| | | | | | 15 | 15 |
| SR | | | | | | |
| | | | | Core Social Science Group 2 | 3 | ** |
| | | | | Core Philosophy | ** | 3 |
| | | | | Core Fine Arts | 3 | ** |
| BCHE | 6190 | | | Biochemistry II | ** | 3 |
| BCHE | 6191 | | | Biochemistry II Lab | ** | 1 |
| CHEM | 4901 | | | Special Problems in Chemistry | ** | 3 |
| CHEM | 4950 | | | Undergraduate Seminar | ** | 1 |
| CHEM | 6100 | 6110 | | Inorganic Chemistry | 3 | 3 |
| CHEM | 6101 | 6111 | | Inorganic Chemistry Lab | 1 | 1 |
| CHEM | 6130 | | | Instrumental Analysis | 3 | ** |
| CHEM | 6131 | | | Instrumental Analysis Lab | 1 | ** |
| | | | | Elective | 3 | ** |
| | | | | | 17 | 15 |

TOTAL HOURS — 122

Curriculum in Biochemistry (BCHM)

| | | | | | | |
|-------------|-------------|-------------|----------|--|-----------|-----------|
| FR | | F | S | | F | S |
| ENGL | 1100 | 1120 | | English Composition I & II | 3 | 3 |
| MATH | 1610 | 1620 | | Calculus I & II | 4 | 4 |
| | | | | Core History | 3 | ** |
| BIOL | 1020 | | | Principles of Biology | ** | 4 |
| CHEM | 1110 | 1120 | | General Chemistry I & II | 3 | 3 |
| CHEM | 1111 | 1121 | | General Chemistry Lab I & II | 1 | 1 |
| CHEM | 1200 | | | Chemical Application | 1 | ** |
| | | | | | 15 | 15 |
| SO | | | | | | |
| PHYS | 1600 | 1610 | | Engr. Phys I & II & Labs (1601, 1611) | 4 | 4 |
| | | | | Core History | 3 | ** |
| MATH | 2630 | | | Calculus III | 4 | ** |
| MATH | | 2650 | | Linear Differential Equation | ** | 3 |
| CHEM | 2070 | 2080 | | Organic Chemistry I & II | 3 | 3 |
| CHEM | 2071 | 2081 | | Organic Chemistry Lab I & II | 1 | 1 |
| CHEM | 2200 | | | Chemical Application II | 1 | ** |
| CHEM | | 3050 | | Analytical Chemistry | ** | 3 |
| CHEM | | 3051 | | Analytical Chemistry Lab | ** | 1 |
| | | | | | 16 | 15 |
| JR | | | | | | |
| ENGL | | 2200 | | Great Books I | ** | 3 |
| BIOL | 3200 | | | General Microbiology | 4 | ** |
| BCHE | 6180 | 6190 | | Biochemistry I & II | 3 | 3 |
| BCHE | 6181 | 6191 | | Biochemistry Lab | 1 | 1 |
| BIOL | | 4100 | | Cell Biology | ** | 3 |
| CHEM | | 3000 | | Chemical Literature | ** | 1 |
| CHEM | 3200 | | | Chemical Application III | 1 | ** |
| CHEM | 6070 | 6080 | | Physical Chemistry I & II | 3 | 3 |
| CHEM | 6071 | 6081 | | Physical Chemistry Lab I & II | 1 | 1 |
| | | | | Elective | 1 | ** |
| | | | | | 14 | 15 |

| | | | | | |
|-------------|-------------|--|--|-----------|-----------|
| SR | | | | | |
| ENGL | 2210 | | Great Books II | 3 | ** |
| | | | Core Fine Arts | ** | 3 |
| | | | Core Philosophy | ** | 3 |
| | | | Core Social Science Group 1 & 2 | 3 | 3 |
| CHEM | 4901 | | Special Problems in Chemistry | ** | 3 |
| CHEM | 4950 | | Undergraduate Seminar | ** | 1 |
| CHEM | 6100 | | Inorganic Chemistry | 3 | ** |
| CHEM | 6101 | | Inorganic Chemistry Lab | 1 | ** |
| CHEM | 6130 | | Instrumental Analysis | 3 | ** |
| CHEM | 6131 | | Instrumental Analysis Lab | 1 | ** |
| | | | Elective | ** | 3 |
| | | | Elective | ** | 2 |
| | | | | 16 | 16 |
| | | | TOTAL HOURS — 122 | | |

| | | | | | |
|-------------|-------------|------|---|-----------|-----------|
| SO | | | | | |
| BIOL | 1020 | | Principles of Biology | 4 | ** |
| BIOL | 1030 | | Organismal Biology | ** | 4 |
| MATH | 1610 | 1620 | Calculus I & II | 4 | 4 |
| ENGL | 2200 | | Great Books I | 3 | ** |
| GEOL | 2010 | | Min & Opt Cryst | 5 | ** |
| GEOL | 2050 | | Ing & Met Petrol | ** | 4 |
| | | | Elective | ** | 3 |
| | | | | 16 | 15 |
| JR | | | | | |
| PHYS | 1500 | 1510 | Gen. Phys I & II & Labs (1501 & 1511) | 4 | 4 |
| | | | Core Social Science Group 1 | ** | 3 |
| | | | Core Fine Arts | 3 | ** |
| | | | Technical Elective | 3 | ** |
| GEOL | 3200 | | Principle Paleont | 3 | ** |
| GEOL | 3400 | | Structural Geology | ** | 4 |
| | | | GEOL Elective | 3 | 4 |
| | | | | 16 | 15 |

Geography

This curriculum in geography promotes geographic literacy as an indispensable element in any educational program. It focuses on spatial relationships and the view of the Earth as the home of humankind. Geography readies students for careers in public services, consulting companies, state or federal agencies, utilities and other professions, as well as for graduate studies in geography.

Curriculum in Geography (GEOG)

| | | | | | |
|-------------|-------------|----------|---|-----------|-----------|
| FR | F | S | | F | S |
| ENGL | 1100 | 1120 | English Composition I & II | 3 | 3 |
| MATH | 1610 | | Calculus I | 4 | ** |
| | | | Core History | 3 | 3 |
| | | | Core Philosophy | ** | 3 |
| COMM | 1000 | | Public Speaking | ** | 3 |
| | | | Foreign Language | 4 | 4 |
| | | | | 14 | 16 |
| SO | | | | | |
| ENGL | 2200 | 2210 | Great Books I & II | 3 | 3 |
| GEOL | 1100 | | Physical Geology | 4 | ** |
| GEOL | 1110 | | Historical Geology | ** | 4 |
| | | | Core Fine Arts | 3 | ** |
| | | | Core Social Science Group 1 & 2 | 3 | 3 |
| STAT | 2510 | | Statistics for Biology & Health Sci. | ** | 3 |
| GEOG | 2010 | | Cultural Geography | 3 | ** |
| GEOG | 2020 | | Physical Geography | ** | 3 |
| | | | | 16 | 16 |
| JR | | | | | |
| GEOG | 2800 | | Geographic Methods | 4 | ** |
| GEOG | 3820 | | Remote Sensing | 4 | ** |
| GEOG | 3830 | | GIS | ** | 4 |
| | | | GEOG Elective | ** | 3 |
| | | | Social Science Elective | 3 | ** |
| | | | Technical Elective | 6 | 3 |
| | | | Elective | ** | 3 |
| | | | | 17 | 13 |
| SR | | | | | |
| | | | Technical Elective | ** | 4 |
| GEOG | 3810 | | Cart and Graphics | 4 | ** |
| GEOG | 4800 | | Geographic Thought | ** | 3 |
| | | | GEOG Elective | 6 | 3 |
| | | | Elective | 4 | 4 |
| | | | | 14 | 14 |
| | | | TOTAL HOURS — 120 | | |

Technical Elective: see adviser for approved course listing.
 GEOG Elective: see adviser for approved course listing.
 Students either pass the computer competency test or take COMP 1000 as one of their electives.

Geology

This curriculum provides a background in the geosciences and opportunity to specialize in an area of interest (i.e., environmental geology, paleontology) through elective major or related courses. It is designed for those interested in preparation for graduate studies or employment in the field of geology.

Curriculum in Geology (GEOL)

| | | | | | |
|-------------|-------------|----------|--|-----------|-----------|
| FR | F | S | | F | S |
| CHEM | 1030 | 1040 | Fundamentals of Chemistry I & II | 3 | 3 |
| CHEM | 1031 | 1041 | Fundamentals of Chemistry I & II Lab | 1 | 1 |
| | | | Core History | 3 | 3 |
| ENGL | 1100 | 1120 | English Composition I & II | 3 | 3 |
| GEOL | 1100 | | Physical Geology | 4 | ** |
| GEOL | 1110 | | Historical Geology | ** | 4 |
| | | | | 14 | 14 |

SUMMER

| | | | | | |
|-------------|-------------|--|----------------------------|-----------|-----------|
| GEOL | 3650 | | Field Camp | 6 | |
| SR | | | | | |
| PHIL | | | 1010 or 1020 | 3 | ** |
| ECON | 2020 | | Microeconomics | ** | 3 |
| ENGL | 2210 | | Great Books II | ** | 3 |
| | | | Technical Elective | 4 | ** |
| GEOL | 4010 | | Sed Petrol | 3 | ** |
| GEOL | 4110 | | Stratigraphy | ** | 3 |
| | | | GEOL Elective | 4 | 4 |
| | | | Elective | ** | 3 |
| | | | | 14 | 16 |

TOTAL HOURS — 126

Technical Elective - see adviser for approved course listing.
 GEOE Elective - see adviser for approved course listing.
 Students either pass the computer competency test or take COMP 1000 as one of their electives.

Laboratory Technology and Medical Technology

These curricula, leading to the degree of Bachelor of Science in Laboratory Technology or Bachelor of Science in Medical Technology, prepare students for medical laboratory careers in fields such as public health, bacteriology, environmental testing, industrial quality control, research and forensic science. Graduates may choose to qualify as certified medical technologists. This is accomplished by successfully completing a 12-month training period (rotating hospital internship) in an accredited School of Medical Technology and passing a national certifying examination.

Curriculum in Laboratory Technology (LABT)

| | | | | | |
|-------------|-------------|-------------|---|-----------|-----------|
| FR | F | S | | F | S |
| BIOL | 1020 | | Principles of Biology | ** | 4 |
| ENGL | 1100 | 1120 | English Composition I & II | 3 | 3 |
| HIST | 1010 | 1020 | World History | 3 | 3 |
| MATH | 1610 | | Calculus I | 4 | ** |
| CHEM | 1110 | 1120 | General Chemistry I & II | 3 | 3 |
| CHEM | 1111 | 1121 | General Chemistry Lab I & II | 1 | 1 |
| LABT | 1010 | | Orientation | 1 | ** |
| STAT | 2510 | | Statistics for Biology & Health Science | ** | 3 |
| | | | | 15 | 17 |
| SO | | | | | |
| ENGL | 2200 | 2210 | Great Books I & II | 3 | 3 |
| PHIL | 1030 | | Ethics & Health Science | 3 | ** |
| BIOL | 2500 | 2510 | Human Anatomy & Physiology I & II | 4 | 4 |
| BIOL | 3200 | | General Microbiology | ** | 4 |
| CHEM | 1200 | | Chemical Application | 1 | ** |
| CHEM | 2070 | 2080 | Organic Chemistry I & II | 3 | 3 |
| CHEM | 2071 | 2081 | Organic Chemistry Lab I & II | 1 | 1 |
| | | | | 15 | 15 |
| JR | | | | | |
| | | | Core Fine Arts | ** | 3 |
| | | | Core Social Science Group 1 | ** | 3 |
| BIOL | 4200 | | Clinical Microbiology | 4 | ** |
| BIOL | 3000 | | Genetics | 4 | ** |
| BCHE | 6180 | | Biochemistry I | 3 | ** |
| LABT | 4010 | | Hematology | 5 | ** |
| CHEM | 3050 | | Analytical Chemistry | ** | 3 |
| CHEM | 3051 | | Analytical Chemistry Lab | ** | 1 |
| | | | Elective | ** | 6 |
| | | | | 16 | 16 |

| | | | | | |
|-------------|-------------|--|--|-----------|-----------|
| SR | | | Core Social Science Group 2 | 3 | ** |
| | | | Technical Elective | 4 | 4 |
| LABT | 4250 | | Clinical Biochemistry Instrument | 4 | ** |
| BIOL | 6500 | | Immunology | ** | 3 |
| BIOL | 6501 | | Immunology Lab | ** | 2 |
| LABT | 4050 | | Clinical Immunohematology/Parasit | ** | 5 |
| CHEM | 2200 | | Chemical Application | 1 | ** |
| | | | | 12 | 14 |

TOTAL HOURS — 120

Technical Elective: see adviser for approved course listing.

Curriculum in Medical Technology (MEDT)

| | | | | |
|-------------|-------------|----------|---|--------------|
| FR | F | S | F | S |
| BIOL | 1020 | | Principles of Biology | ** 4 |
| ENGL | 1100 | 1120 | English Composition I & II | 3 3 |
| HIST | 1010 | 1020 | World History | 3 3 |
| MATH | 1610 | | Calculus I | 4 ** |
| CHEM | 1110 | 1120 | General Chemistry I & II | 3 3 |
| CHEM | 1111 | 1121 | General Chemistry Lab I & II | 1 1 |
| LABT | 1010 | | Orientation | 1 ** |
| | | | | 15 14 |

| | | | | |
|-------------|-------------|-------------|---|--------------|
| SO | | | Ethics & Health Science | 3 ** |
| PHIL | 1030 | | General Physics I Lab (1501) | 4 ** |
| PHYS | 1500 | | Core Social Science Group 1 | ** 3 |
| | | | Human Anatomy & Physiology I & II | 4 4 |
| BIOL | 2500 | 2510 | General Microbiology | ** 4 |
| BIOL | 3200 | | Chemical Application | ** 1 |
| CHEM | 1200 | | Organic Chemistry I & II | 3 3 |
| CHEM | 2070 | 2080 | Organic Chemistry Lab I & II | 1 1 |
| CHEM | 2071 | 2081 | | 16 15 |

| | | | | |
|-------------|-------------|------|---|--------------|
| JR | | | Great Books I & II | 3 3 |
| ENGL | 2200 | 2210 | Core Fine Arts | ** 3 |
| | | | Public Speaking | 3 ** |
| COMM | 1000 | | Statistics for Biology & Health Science | 3 ** |
| STAT | 2510 | | Genetics | ** 4 |
| BIOL | 3000 | | Immunology | ** 3 |
| BIOL | 6500 | | Immunology Lab | ** 2 |
| BIOL | 6501 | | Chemical Application | ** 1 |
| CHEM | 2200 | | Analytical Chemistry | 3 ** |
| CHEM | 3050 | | Analytical Chemistry Lab | 1 ** |
| CHEM | 3051 | | Elective | 3 ** |
| | | | | 16 16 |

| | | | | |
|-------------|-------------|-------------|--|--------------|
| SR | | | Core Social Science Group 2 | ** 3 |
| BIOL | 4200 | | Clinical Microbiology | 4 ** |
| BCHE | 6180 | 6190 | Biochemistry I & II | 3 3 |
| LABT | 4010 | | Hematology | ** 5 |
| LABT | 4050 | | Clinical Immunohematology/Parasit | ** 5 |
| LABT | 4250 | | Clinical Biochemistry/Instrument | ** 4 |
| | | | Elective | 3 ** |
| | | | | 15 15 |

TOTAL HOURS — 122

Degree is granted upon successful completion of a clinical internship at an approved school of medical technology affiliated with Auburn University.

Mathematics

This curriculum prepares students for graduate study and careers as mathematicians.

Curriculum in Mathematics (MATH)

| | | | | |
|-------------|-------------|-------------|--|--------------|
| FR | F | S | F | S |
| ENGL | 1100 | 1120 | English Composition I & II | 3 3 |
| | | | Core Philosophy | 3 ** |
| | | | Core History | 3 3 |
| | | | Core/Natural Science | 4 4 |
| MATH | 1610 | 1620 | Calculus I & II | 4 4 |
| COMP | | 1200 | (see adviser before selecting section) | ** 2 |
| | | | | 17 16 |
| SO | | | Core Social Science Group 1 & 2 | 3 3 |
| ENGL | 2200 | 2210 | Great Books | 3 3 |
| MATH | 2630 | | Calculus III | 4 ** |
| MATH | 2650 | | Linear Differential Equations | ** 3 |
| MATH | 2660 | | Topics in Linear Algebra | 3 ** |
| MATH | 3100 | | Introduction to Advanced Math | ** 3 |
| | | | Elective | 3 3 |
| | | | | 16 15 |

| | | | | |
|-------------|-------------|-------------|--|--------------|
| JR | | | Core Fine Arts | ** 3 |
| | | | Foreign Language (see adviser) | 4 4 |
| COMM | 1000 | | Public Speaking | 3 ** |
| MATH | 6200 | 6210 | Analysis I & II | 3 3 |
| MATH | 6310 | 6320 | Introduction to Abstract Algebra I & II | 3 3 |
| | | | Elective | 3 3 |
| | | | | 16 16 |

| | | | | |
|-----------|--|--|---------------------------------------|--------------|
| SR | | | Applied Math Requisite | 3 ** |
| | | | Introduction to Topology | 3 ** |
| | | | Math Requisite | 3 9 |
| | | | Elective | 3 3 |
| | | | | 12 12 |

TOTAL HOURS - 120

Math Requisite: see adviser for approved course listing
 Applied Math Requisite: see adviser for approved course listing.
 Core/Nature Science: see adviser for approved course listing.

Applied Mathematics

The Department of Mathematics offers three options in the field of Applied Mathematics. The option in Applied Mathematics is suitable for students who are preparing for graduate work in mathematics as well as for those anticipating careers supported by significant applied mathematics such as the traditional fields of engineering, physical science or computer science and the more recent allied fields of biological, behavioral or managerial sciences. The option in Discrete Mathematics prepares students for graduate work in mathematics or theoretical computer science, and for careers in industry supported by modern applied mathematics dealing with problems in graph theory, operations research, discrete optimization, computer science, communications and information sciences. The option in Actuarial Science prepares students for a career in the insurance industry and other businesses relying on the expertise of actuaries, but is at the same time flexible enough to allow its graduates to enter graduate programs in Mathematics and related areas.

Students should consult the College of Science and Mathematics to determine appropriate technical electives for the emphasis of their choice. Students who desire more flexibility or emphasis on the liberal arts should pursue the MATH curriculum.

Option in Applied Mathematics (AMTH)

| | | | | |
|-------------|-------------|-------------|--|--------------|
| FR | F | S | F | S |
| ENGL | 1100 | 1120 | English Composition I & II | 3 3 |
| | | | Core Philosophy | 3 ** |
| | | | Core History | 3 3 |
| | | | Core/Natural Science | 4 4 |
| MATH | 1610 | 1620 | Calculus I & II | 4 4 |
| COMP | | 1200 | (see adviser before selecting section) | ** 2 |
| | | | | 17 16 |
| SO | | | Core Social Science Group 1 & 2 | 3 3 |
| ENGL | 2200 | 2210 | Great Books | 3 3 |
| MATH | 2630 | | Calculus III | 4 ** |
| MATH | 2650 | | Linear Differential Equations | ** 3 |
| MATH | 2660 | | Topics in Linear Algebra | 3 ** |
| MATH | 3100 | | Introduction to Advanced Math | ** 3 |
| | | | Elective | 3 3 |
| | | | | 16 15 |

| | | | | |
|-------------|-------------|-------------|--|--------------|
| JR | | | Core Fine Arts | ** 3 |
| | | | Public Speaking | 3 ** |
| COMM | 1000 | | Analysis I & II | 3 3 |
| MATH | 6200 | 6210 | Numerical Analysis I & II | 3 3 |
| MATH | 6630 | 6640 | Group Requisite | 3 3 |
| | | | Elective | 4 4 |
| | | | | 16 16 |

| | | | | |
|-------------|-------------|--|--|--------------|
| SR | | | Math Modeling: Continuous | 3 ** |
| MATH | 6000 | | Probability & Stochastic Proc I | 3 ** |
| MATH | 6670 | | Math Requisite | 3 9 |
| | | | Group Requisite | 3 ** |
| | | | Elective | ** 3 |
| | | | | 12 12 |

TOTAL HOURS - 120

Math Requisite: see adviser for approved course listing
 Group Requisite: see adviser for approved course listing.

Option in Applied Discrete Mathematics (ADSM)

| FR | F | S | F | S |
|-----------|------|------|---|-----------|
| ENGL | 1100 | 1120 | English Composition I & II 3 | 3 |
| | | | Core Science (for science majors) 4 | 4 |
| | | | Core History 3 | 3 |
| COMP | | 1200 | Introduction to Computer Engr. & Sci. ** | 2 |
| MATH | 1610 | 1620 | Calculus I & II 4 | 4 |
| | | | 14 | 16 |
| SO | | | | |
| ENGL | 2200 | 2210 | Great Books I & II 3 | 3 |
| | | | Core Social Science Group 1 & 2 3 | 3 |
| | | | Core Philosophy 3 | ** |
| | | | Core Fine Arts ** | 3 |
| COMP | 2000 | | Programming with HTML & Java 3 | ** |
| COMP | | 3000 | Object Oriented Program Engr. & Sci. ** | 3 |
| MATH | 2630 | | Calculus 4 | ** |
| MATH | | 2660 | Topics in Linear Algebra ** | 3 |
| | | | 16 | 15 |
| JR | | | | |
| ADMH | 3710 | | Discrete Math 3 | ** |
| ADMH | 6170 | | Finite Fields 3 | ** |
| ADMH | | 6200 | Computer Algebra ** | 3 |
| ADMH | 6750 | | Graph Theory 3 | ** |
| STAT | | 3600 | Probability & Statistics I ** | 3 |
| | | | Applied Analysis Elective ** | 3 |
| | | | Discrete Math Elective 3 | 3 |
| | | | Interdisciplinary Elective 3 | 3 |
| | | | 15 | 15 |
| SR | | | | |
| | | | Applied Analysis Elective 3 | ** |
| | | | Discrete Elective 6 | 3 |
| | | | Math Elective ** | 3 |
| | | | Interdisciplinary Elective 3 | 6 |
| | | | Elective 3 | 2 |
| | | | 15 | 14 |

TOTAL HOURS - 120

Applied Analysis Elective/Discrete Elective/Math Elective/Interdisciplinary Elective: see adviser for approved course listing.

Option in Actuarial Science (ACTU)

| FR | F | S | F | S |
|-----------|------|------|--|-----------|
| ENGL | 1100 | 1120 | English Composition I & II 3 | 3 |
| | | | Core Philosophy 3 | ** |
| | | | Core History I & II 3 | 3 |
| | | | Core Science I & II 4 | 4 |
| COMP | | 1200 | Introducton to Computer Engr. & Sci. ** | 2 |
| MATH | 1610 | 1620 | Calculus I & II 4 | 4 |
| | | | 17 | 16 |
| SO | | | | |
| ENGL | 2200 | 2210 | Great Books I & II 3 | 3 |
| ECON | 2020 | 2030 | Prin. of Microecon. & Macroecon. 3 | 3 |
| ACCT | 2910 | | Fundamentals of Accounting 3 | ** |
| STAT | | 3600 | Probability & Statistics I ** | 3 |
| MATH | 2630 | | Calculus III 4 | ** |
| MATH | | 2650 | Linear Differential Equations ** | 3 |
| MATH | 2660 | | Topics in Linear Algebra 3 | ** |
| MATH | | 3100 | Introduction to Advanced Math ** | 3 |
| | | | 16 | 15 |
| JR | | | | |
| | | | Core Fine Arts 3 | ** |
| | | | Core Social Science Group II 3 | ** |
| FINC | | 3610 | Principles of Business Finance ** | 3 |
| | | | Statistics Requisite ** | 3 |
| MATH | 6670 | | Probability & Stochastic Processes I 3 | ** |
| MATH | | 6790 | Actuarial Seminar I ** | 3 |
| | | | Math Elective 3 | 3 |
| | | | Elective 4 | 4 |
| | | | 16 | 16 |
| SR | | | | |
| FINC | 3630 | | Advanced Business Finance 3 | ** |
| MATH | 6000 | | Math Modeling: Continuous 3 | ** |
| MATH | 6800 | 6810 | Actuarial Mathematics I & II 3 | 3 |
| MATH | | 6820 | Actuarial Seminar II ** | 3 |
| UNIV | | 4990 | Undergraduate Graduation ** | 0 |
| | | | Math Elective ** | 3 |
| | | | Elective 3 | 3 |
| | | | 12 | 12 |

TOTAL HOURS - 120

Core Science I/II: One of the sequences Engineering Physics I/II, Principles of Biology/Organismal Biology, Fundamentals of Chemistry I/II, Physical/Historical Geology.
 Math Electives: Courses designated MATH or ADMH at the level of 4000 or higher; no more than one 4000-level course. Subject to adviser's approval.
 Statistics Requisite: Any course that will serve as the statistics prerequisite for FINC-3630. See adviser for approved courses.

Coherence Requirement: Course choices for Core Science and Math Electives, together with the required interdisciplinary courses, must constitute a coherent plan of study, chosen with adviser's approval.

Microbiology

This major is for students who wish to pursue careers in one of the various sub-disciplines of the science or for those preparing for professional degree programs in medicine or veterinary medicine. Required courses provide a strong and diverse background. Students have the opportunity through selection of elective courses to concentrate on special areas of interest, including biotechnology, microbial physiology and genetics and environmental, industrial and health-related aspects of microbiology.

Curriculum in Microbiology (MICB)

| FR | F | S | F | S |
|-----------|------|------|--|-----------|
| BIOL | 1020 | | Principles of Biology 4 | ** |
| BIOL | | 1030 | Organismal Biology ** | 4 |
| ENGL | 1100 | 1120 | English Composition I & II 3 | 3 |
| CHEM | 1030 | 1040 | Fund of Chemistry I & II 3 | 3 |
| CHEM | 1031 | 1041 | Fund of Chemistry I & II Lab 1 | 1 |
| MATH | 1610 | 1620 | Calculus I & II 4 | 4 |
| | | | 15 | 15 |
| SO | | | | |
| ENGL | 2200 | 2210 | Great Books I 3 | 3 |
| PHYS | 1500 | 1510 | Gen. Physics I & II & Labs (1501, 1511) 4 | 4 |
| CHEM | 2070 | 2080 | Organic Chemistry I & II 3 | 3 |
| CHEM | 2071 | 2081 | Organic Chemistry I & II Lab 1 | 1 |
| BIOL | 3000 | | Genetics 4 | ** |
| BIOL | | 3200 | General Microbiology ** | 4 |
| | | | 15 | 15 |
| JR | | | | |
| | | | Core History I & II 3 | 3 |
| BIOL | | 4100 | Cell Biology ** | 3 |
| BCHE | 6180 | 6190 | Biochemistry I & II 3 | 3 |
| BCHE | 6181 | | Biochemistry I Lab 1 | ** |
| BIOL | 4200 | | Clinical Microbiology 4 | ** |
| BIOL | 4210 | | Microbial Physiology 3 | ** |
| BIOL | | 4220 | Introductory Molecular Genetics ** | 3 |
| | | | Elective 3 | 3 |
| | | | 17 | 15 |
| SR | | | | |
| | | | Core Philosophy ** | 3 |
| | | | Core Fine Arts ** | 3 |
| | | | Core Social Science Group 1 & 2 3 | 3 |
| BIOL | | 4230 | Virology ** | 3 |
| BIOL | 4950 | | Undergraduate Seminar 1 | ** |
| BIOL | 6500 | | Immunology 3 | ** |
| BIOL | 6501 | | Immunology Lab 2 | ** |
| | | | Biology Elective 3 | 3 |
| | | | Elective 3 | ** |
| | | | 15 | 15 |

TOTAL HOURS - 122

Students either pass the computer competency test or take COMP 1000 as one of their electives.

Curriculum in Molecular Biology (MOLB)

| FR | F | S | F | S |
|-----------|------|------|---|-----------|
| BIOL | 1020 | | Principles of Biology 4 | ** |
| BIOL | | 1030 | Organismal Biology ** | 4 |
| ENGL | 1100 | 1120 | English Composition I & II 3 | 3 |
| CHEM | 1030 | 1040 | Fund of Chemistry I & II 3 | 3 |
| CHEM | 1031 | 1041 | Fund of Chemistry I & II Lab 1 | 1 |
| MATH | 1610 | 1620 | Calculus I & II 4 | 4 |
| | | | 15 | 15 |
| SO | | | | |
| ENGL | 2200 | 2210 | Great Books I 3 | 3 |
| PHYS | 1500 | 1510 | General Physics I & II & Lab (1501, 1511)4 | 4 |
| CHEM | 2070 | 2080 | Organic Chemistry I & II 3 | 3 |
| CHEM | 2071 | 2081 | Organic Chemistry I & II Lab 1 | 1 |
| BIOL | | 3000 | Genetics ** | 4 |
| BIOL | 3200 | | General Microbiology 4 | ** |
| | | | 15 | 15 |
| JR | | | | |
| BIOL | | | Core History 3 | 3 |
| | | | Core Fine Arts 3 | ** |
| | | | Core Philosophy ** | 3 |
| BIOL | 4100 | | Cell Biology 3 | ** |
| BIOL | 4210 | | Microbial Physiology 3 | ** |
| BIOL | 4320 | | Introduction to Molecular Genetics ** | 3 |
| BIOL | 6521 | | Gene Expression & Rec DNA Lab ** | 2 |
| | | | Elective 4 | 3 |
| | | | 16 | 14 |

| | | | | | |
|-------------|-------------|-------------|---|-----------|-----------|
| SR | | | Social Science Core Group I & II | 3 | 3 |
| BCHE | 6180 | 6190 | Biochemistry I & II | 3 | 3 |
| BCHE | 6181 | 6191 | Biochemistry I & II Lab | 1 | 1 |
| BIOL | 4950 | 4950 | Undergraduate Seminar | 1 | 1 |
| BIOL | 4980 | 4980 | Undergraduate Research | 3 | 3 |
| | | | Biol. Elective/Molecular Biology Elective ... | 4 | 4 |
| | | | | 15 | 15 |

TOTAL HOURS - 120

Biology Electives: see adviser for approved course listing.
 Students either pass the computer competency test or take COMP 1000 as one of their electives.

Physics

Physics majors acquire a firm foundation for careers in physics and related fields and excellent preparation for further study. Through the judicious use of electives, this curriculum provides not only a thorough understanding of physics, but also the ability to solve problems in other fields of interest to the student.

Curriculum in Physics (PHYS)

| | | | | | |
|-----------|----------|----------|----------------------------------|-----------|-----------|
| FR | F | S | | F | S |
| ENGL | 1100 | 1120 | English Composition I & II | 3 | 3 |
| MATH | 1610 | 1620 | Calculus I & II OR | 4 | 4 |
| MATH | 1710 | 1720 | Calc Eng. Science I & II | | |
| PHYS | 1600 | 1610 | Physics I & II OR | 4 | 4 |
| PHYS | 1607 | 1617 | Honors Physics I & II | | |
| | | | Core Philosophy | ** | 3 |
| | | | Core Fine Art | 3 | ** |
| | | | | 14 | 14 |

| | | | | | |
|-------------|------------------|------|--|-----------|-----------|
| SO | | | Great Books I & II | 3 | 3 |
| ENGL | 2200 | 2210 | Public Speaking | ** | 3 |
| COMM | 1000 | | History | 3 | 3 |
| MATH | 2630/2730 | | Calculus III or Calc. Eng. Science III | 4 | ** |
| MATH | 2650 | | Differential Equations | ** | 3 |
| PHYS | 2200 | | Intro. Quantum Physics & Relativity | 3 | ** |
| PHYS | 2300 | | Physics Laboratory Skills | ** | 2 |
| PHYS | 2100 | | Intermediate Mechanics | ** | 3 |
| | | | | 16 | 14 |

| | | | | | |
|-------------|-------------|--|---|-----------|-----------|
| JR | | | Social Science I & II | 3 | 3 |
| | | | Professional Elective* | ** | 3 |
| PHYS | 3100 | | Intermediate E & M | 3 | ** |
| PHYS | 3200 | | Statistical Thermodynamics | ** | 3 |
| PHYS | 4100 | | Fundamentals of Quantum Mech | 3 | ** |
| | | | Sci Elective-Chem/Biology/Geol | 4 | 4 |
| | | | Elective | 3 | 3 |
| | | | | 16 | 16 |

| | | | | | |
|-------------|-------------|--|--------------------------------------|-----------|-----------|
| SR | | | Fund Experiments in Physics | 2 | ** |
| PHYS | 4200 | | Professional Elective * | 3 | 7 |
| | | | Physics Elective | ** | 3 |
| | | | Elective | 9 | 6 |
| | | | | 14 | 16 |

TOTAL HOURS - 120

*See adviser for approved courses.

Zoology

This curriculum prepares students for graduate study and a variety of careers in animal biology. The student has the choice of several options depending on the student's particular interest.

Curriculum in Zoology (ZOOL)

| | | | | | |
|-----------|----------|----------|--|-----------|-----------|
| FR | F | S | | F | S |
| BIOL | 1020 | | Principles of Biology | 4 | ** |
| BIOL | 1030 | | Organismal Biology | ** | 4 |
| CHEM | 1030 | 1040 | Fundamentals of Chemistry I & II | 3 | 3 |
| CHEM | 1031 | 1041 | Fundamentals of Chemistry I & II Lab | 1 | 1 |
| ENGL | 1100 | 1120 | English Composition I & II | 3 | 3 |
| | | | Core History | 3 | 3 |
| | | | | 14 | 14 |

| | | | | | |
|-------------|-------------|------|--|-----------|-----------|
| SO | | | Calculus I & II | 4 | 4 |
| MATH | 1610 | 1620 | Great Books I & II | 3 | 3 |
| ENGL | 2200 | 2210 | Social Science Core | ** | 3 |
| | | | Organic Chemistry I & II | 3 | 3 |
| CHEM | 2070 | 2080 | Organic Chemistry I & II Lab | 1 | 1 |
| CHEM | 2071 | 2081 | Organic Chemistry I & II Lab | 1 | 1 |
| BIOL | 3000 | | Genetics | 4 | ** |
| BIOL | 3030 | | Evolution & Systematics | ** | 3 |
| | | | | 15 | 17 |

| | | | | | |
|-------------|-------------|------|--|-----------|-----------|
| JR | | | Gen. Physics I & II & Labs (1501, 1511) | 4 | 4 |
| PHYS | 1500 | 1510 | Social Science Core | ** | 3 |
| | | | Core Fine Arts | ** | 3 |
| COMM | 1000 | | Public Speaking | 3 | ** |
| BIOL | 3060 | | Ecology | 4 | ** |
| BIOL | 4100 | | Cell Biology | ** | 3 |
| BIOL | 6240 | | Animal Physiology | ** | 4 |
| | | | Biology Elective | 4 | ** |
| | | | Elective | ** | 3 |
| | | | | 18 | 17 |

| | | | | | |
|-----------|------|--|----------------------------------|-----------|-----------|
| SR | | | Core Philosophy | ** | 3 |
| STAT | 3010 | | Statistics for Engr. & Sci. | 3 | ** |
| | | | Biology Elective | 11 | 11 |
| | | | | 14 | 14 |

TOTAL HOURS - 123

Biology Electives: see adviser for approved course listing.
 Students either pass the computer competency test or take COMP 1000 as one of their electives.

Zoology/Cellular Biology/Physiology Track (ZOOL, CBPS)

| | | | | | |
|-----------|----------|----------|--|-----------|-----------|
| FR | F | S | | F | S |
| BIOL | 1020 | | Principles of Biology | 4 | ** |
| BIOL | 1030 | | Organismal Biology | ** | 4 |
| CHEM | 1030 | 1040 | Fundamentals of Chemistry I & II | 3 | 3 |
| CHEM | 1031 | 1041 | Fundamentals of Chemistry I & II Lab | 1 | 1 |
| ENGL | 1100 | 1120 | English Composition I & II | 3 | 3 |
| | | | Core History | 3 | 3 |
| | | | Core Philosophy | ** | 3 |
| | | | | 14 | 17 |

| | | | | | |
|-------------|-------------|------|--|-----------|-----------|
| SO | | | Calculus I & II | 4 | 4 |
| MATH | 1610 | 1620 | Great Books I & II | 3 | 3 |
| ENGL | 2200 | 2210 | Social Science Core | ** | 3 |
| | | | Organic Chemistry I & II | 3 | 3 |
| CHEM | 2070 | 2080 | Organic Chemistry I & II Lab | 1 | 1 |
| CHEM | 2071 | 2081 | Organic Chemistry I & II Lab | 1 | 1 |
| BIOL | 3000 | | Genetics | 4 | ** |
| BIOL | 3030 | | Evolution & Systematics | ** | 3 |
| | | | | 15 | 17 |

| | | | | | |
|-------------|-------------|------|--|-----------|-----------|
| JR | | | General Physics I & II/Labs (1501, 1511) ... | 4 | 4 |
| PHYS | 1500 | 1510 | Social Science Core | ** | 3 |
| BIOL | 3060 | | Ecology | ** | 4 |
| BIOL | 4100 | | Cell Biology | 3 | ** |
| BIOL | 4101 | | Cell Biology Lab | 2 | ** |
| BIOL | 4410 | | Vertebrate Development | ** | 5 |
| | | | 4010 or 4020 | 4 | ** |
| | | | Elective | 3 | ** |
| | | | | 16 | 16 |

| | | | | | |
|-------------|-------------|--|----------------------------------|-----------|-----------|
| SR | | | Core Fine Arts | 3 | ** |
| COMM | 1000 | | Public Speaking | ** | 3 |
| STAT | 3010 | | Statistics for Engr. & Sci. | ** | 3 |
| BIOL | 6240 | | Animal Physiology | ** | 4 |
| | | | Biology Elective | 11 | 4 |
| | | | | 14 | 14 |

TOTAL HOURS - 123

Biology Electives: see adviser for approved course listing.
 Students either pass the computer competency test or take COMP 1000 as one of their electives.

Zoology/Conservation & Biodiversity Track (ZOOL, CONS)

| | | | | | |
|-----------|----------|----------|--|-----------|-----------|
| FR | F | S | | F | S |
| BIOL | 1020 | | Principles of Biology | 4 | ** |
| BIOL | 1030 | | Organismal Biology | ** | 4 |
| CHEM | 1030 | 1040 | Fundamentals of Chemistry I & II | 3 | 3 |
| CHEM | 1031 | 1041 | Fundamentals of Chemistry I & II Lab | 1 | 1 |
| ENGL | 1100 | 1120 | English Composition I & II | 3 | 3 |
| MATH | 1610 | | Calculus I | 4 | ** |
| | | | Core History | ** | 3 |
| | | | Core Social Science | ** | 3 |
| | | | | 15 | 17 |

| | | | | | |
|-------------|-------------|-------------|--|-----------|-----------|
| SO | | | | | |
| ENGL | 2200 | 2210 | Great Books I & II | 3 | 3 |
| | | | Core History | 3 | ** |
| | | | Core Philosophy | ** | 3 |
| | | | Core Social Science | 3 | ** |
| | | | Core Fine Arts | 3 | ** |
| BIOL | | 3000 | Genetics | ** | 4 |
| BIOL | | 3060 | Ecology | ** | 4 |
| CHEM | 2070 | | Organic Chemistry I | 3 | ** |
| PHYS | 1500 | | General Physics & Lab (1501) | ** | 4 |
| | | | | 15 | 18 |
| JR | | | | | |
| BIOL | 3030 | | Evolution & Systematics | 3 | ** |
| BIOL | 4090 | | Conservation Biology | 3 | ** |
| BIOL | 4010 | 4020 | Vertebrate & Invert. Biodiversity | 4 | 4 |
| BIOL | | 6240 | Animal Physiology | ** | 4 |
| BIOL | 4100 | | Cell Biology | 3 | ** |
| | | | Diversity Elective | ** | 4 |
| | | | Elective | ** | 3 |
| | | | | 13 | 15 |
| SR | | | | | |
| BIOL | | 6120 | Systematic Botany | ** | 4 |
| WILD | 3280 | | Principles of Wildlife Management | 3 | ** |
| WILD | 3281 | | Principles of Wildlife Management Lab | 1 | ** |
| | | | Diversity Elective | 4 | 4 |
| | | | Ecology Elective | 3 | ** |
| ENTM | 3040 | | General Entomology | 4 | ** |
| | | | Public Speaking | ** | 3 |
| | | | | 15 | 11 |

TOTAL HOURS - 122

Students either pass the computer competency test or take COMP 1000 as one of their electives.

Zoology/Ecology, Evolution & Behavior Track (ZOOL, ECEV)

| | | | | | | |
|-------------|-------------|-------------|-------------|--|-----------|-----------|
| FR | | F | S | | F | S |
| BIOL | 1020 | | | Principles of Biology | 4 | ** |
| BIOL | | 1030 | | Organismal Biology | ** | 4 |
| CHEM | 1030 | 1040 | | Fundamentals of Chemistry I & II | 3 | 3 |
| CHEM | 1031 | 1041 | | Fundamentals of Chemistry I & II Lab | 1 | 1 |
| ENGL | 1100 | 1120 | | English Composition I & II | 3 | 3 |
| MATH | 1610 | 1620 | | Calculus I & II | 4 | 4 |
| | | | | Core Social Science | ** | 3 |
| | | | | | 15 | 18 |
| SO | | | | | | |
| ENGL | 2200 | 2210 | | Great Books I & II | 3 | 3 |
| | | | | Core History | 3 | ** |
| | | | | Core Philosophy | ** | 3 |
| | | | | Core Social Science | 3 | ** |
| | | | | Core Fine Arts | 3 | ** |
| BIOL | | 3000 | | Genetics | ** | 4 |
| BIOL | | 4100 | | Cell Biology | ** | 3 |
| CHEM | 2070 | | | Organic Chemistry | 3 | ** |
| PHYS | 1500 | | | General Physics Lab (1501) | ** | 4 |
| | | | | | 15 | 17 |
| JR | | | | | | |
| COMM | 1000 | | | Public Speaking | 3 | ** |
| STAT | 2510 | | | Statistics for Engr. & Sci. | 3 | ** |
| BIOL | | 3030 | | Evolution & Systematics | ** | 3 |
| BIOL | | 3060 | | General Ecology | 4 | ** |
| BIOL | | 4020 | 4010 | Vertebrate & Invert. Biodiversity | 4 | 4 |
| BIOL | | 6240 | | Animal Physiology | ** | 4 |
| | | | | Elective | ** | 3 |
| | | | | | 14 | 14 |
| SR | | | | | | |
| | | | | Core History | 3 | ** |
| BIOL | 6650 | | | Ethology | 4 | ** |
| BIOL | | 6140 | | Plant Ecology | ** | 4 |
| | | | | Ecology Elective | 3 | ** |
| | | | | Anat/Cell Phys Elective | ** | 7 |
| | | | | Diversity Elective | 4 | 4 |
| | | | | | 14 | 15 |

TOTAL HOURS - 122

Anat/Cell/Phy Elective: see adviser for approved course listing.
 Diversity Elective: see adviser for approved course listing.
 Students either pass the computer competency test or take COMP 1000 as one of their electives.

Curriculum in Marine Biology (MARB)

| | | | | | | |
|--|-------------|-------------|----------|---|-----------|-----------|
| FR | | F | S | | F | S |
| BIOL | 1020 | | | Principles of Biology | 4 | ** |
| BIOL | | 1030 | | Organismal Biology | ** | 4 |
| ENGL | 1100 | 1120 | | English Composition I & II | 3 | 3 |
| | | | | Core Social Sciences | 3 | 3 |
| MATH | 1610 | 1620 | | Calculus I & II | 4 | 4 |
| | | | | | 14 | 14 |
| SO | | | | | | |
| CHEM | 1030 | 1040 | | Fundamental Chemistry I & II | 3 | 3 |
| CHEM | 1031 | 1041 | | Fundamental Chemistry I & II Lab | 1 | 1 |
| PHYS | 1500 | 1510 | | Gen. Physics I & II & Labs (1501, 1511) | 4 | 4 |
| ENGL | | 2200 | | Great Books I | ** | 3 |
| BIOL | 3000 | | | Genetics | 4 | ** |
| BIOL | 3060 | | | Ecology | ** | 4 |
| | | | | | 12 | 15 |
| JR | | | | | | |
| HIST | 1010 | 1020 | | World History | 3 | 3 |
| | | | | Biology Elective | ** | 7 |
| CHEM | 2070 | 2080 | | Organic Chemistry I & II | 3 | 3 |
| CHEM | 2071 | 2081 | | Organic Chemistry I & II Lab | 1 | 1 |
| STAT | 3010 | | | Statistics for Engr. & Sci. | 3 | ** |
| ENGL | 2210 | | | Great Books II | 3 | ** |
| | | | | | 13 | 14 |
| SUMMER MARINE LAB *** | | | | | | |
| Marine Botany or Oceanography or Marine Geology | | | | | | |
| SR | | | | | | |
| | | | | Core Fine Arts | 3 | ** |
| | | | | Core Philosophy | ** | 3 |
| COMM | | 1000 | | Public Speaking | ** | 3 |
| BIOL | 4010 | | | Invertebrate Biodiversity | 4 | ** |
| BIOL | 4100 | | | Cell Biology | 3 | ** |
| BIOL | 4101 | | | Cell Biology Lab | 2 | ** |
| BIOL | | 6240 | | Animal Physiology | ** | 4 |
| | | | | Elective | ** | 3 |
| | | | | | 12 | 13 |

SUMMER MARINE LAB ***

Adv Electives in Marine Science

TOTAL HOURS - 123

Summer Marine Lab - see adviser for approved course listing.
 Biology Elective - see adviser for approved course listing.
 Students either pass the computer competency test or take COMP 1000 as one of their electives.

Curriculum in Biomedical Sciences

| | | | | | | |
|-------------|-------------|-------------|----------|---|-----------|-----------|
| FR | | F | S | | F | S |
| ENGL | 1100 | 1120 | | English Composition I & II | 3 | 3 |
| MATH | 1610 | | | Calculus I | 4 | ** |
| HIST | | 1010 | | World History | ** | 3 |
| CHEM | 1110 | 1120 | | General Chemistry I & II | 3 | 3 |
| CHEM | 1111 | 1121 | | General Chemistry I & II Lab | 1 | 1 |
| SCMH | 1990 | | | Prehealth Orientation | 1 | ** |
| BIOL | 1020 | | | Principles of Biology | 4 | ** |
| BIOL | 1030 | | | Organismal Biology | ** | 4 |
| | | | | | 16 | 14 |
| SO | | | | | | |
| PHYS | 1500 | 1510 | | Gen. Physics I & II & Labs (1501, 1511) | 4 | 4 |
| ENGL | 2200 | 2210 | | Great Books I & II | 3 | 3 |
| HIST | 1020 | | | World History | 3 | ** |
| CHEM | 2070 | 2080 | | Organic Chemistry I & II | 3 | 3 |
| CHEM | 2071 | 2081 | | Organic Chemistry I & II Lab | 1 | 1 |
| COMM | 1000 | | | Public Speaking | 3 | ** |
| BIOL | 3000 | | | Genetics | ** | 4 |
| | | | | | 17 | 15 |
| JR | | | | | | |
| PHIL | | 1030 | | Ethics & Health Science | ** | 3 |
| PSYC | 2010 | | | Introduction to Psychology | 3 | ** |
| | | | | Core Fine Arts | 3 | ** |
| | | | | Core Social Science (Group II) | ** | 3 |
| STAT | 2510 | | | Statistics for Biology & LS | 3 | ** |
| BIOL | 3200 | | | Microbiology | 4 | ** |
| BIOL | | 4100 | | Cell Biology | ** | 3 |
| BIOL | | 4101 | | Cell Biology Lab | ** | 2 |
| BIOL | 4410 | | | Vertebrate Development | 5 | ** |
| | | | | Professional Elective | ** | 4 |
| | | | | | 18 | 15 |

| | | | | | |
|-------------|-------------|-------------|--|-----------|-----------|
| SR | | | | | |
| BCHE | 6180 | 6190 | Biochemistry I & II | 3 | 3 |
| BIOL | 3010 | | Comp. Anat. & BIOL 4000 Histology | 4 | ** |
| BIOL | 6500 | | Immunology | 3 | ** |
| BIOL | | 6600 | Mammalian Physiology | ** | 6 |
| BIOL | | | Undergraduate Research | 2 | ** |
| | | | Electives | 2 | 4 |
| | | | | 14 | 13 |

TOTAL HOURS - 122

It is recommended that a student take the equivalent of one year of a foreign language or CHEM 3160.

Student must either pass the computer competency test or take COMP 1000 as one of their electives.

| | | | | | |
|-------------|-------------|-------------|--|-----------|-----------|
| JR | | | | | |
| PHIL | | 1030 | Ethics & Health Science | ** | 3 |
| PSYC | 2010 | | Introduction to Psychology | 3 | ** |
| | | | Core Social Science | ** | 3 |
| | | | Core Fine Arts | 3 | ** |
| STAT | 2510 | | Statistics for Biology & LS | 3 | ** |
| BIOL | 3200 | | Microbiology | 4 | ** |
| BIOL | | 4101 | Cell Biology Lab | ** | 2 |
| BIOL | | 4100 | Cell Biology | ** | 3 |
| BIOL | 4410 | | Vertebrate Development | 5 | ** |
| | | | | 18 | 11 |

At the end of the sophomore year, or in the fall of the junior year, the student must declare a major.

Student must either pass the computer competency test or take COMP 1000 as one of their electives.

Professional Curricula

Pre-Health professional curricula are offered in pre-dentistry, pre-medicine, pre-optometry, pre-physical therapy, pre-pharmacy and pre-veterinary medicine. Advisers are available in each curriculum to guide the students concerning admissions requirements to the professional schools. The department in which students major will advise them where applicable. Completion of these curricula does not assure admission to a professional school. Competition for admission to professional schools is keen; the number of qualified applicants exceeds the number of places available.

Pre-Dentistry and Pre-Medicine

These programs are designed to prepare students for medical and dental schools and lead to a Bachelor of Science degree in one of several majors offered through the College. The requirements are very exacting and demand high scholastic competence and performance.

Students in pre-dentistry or pre-medicine should take the national Dental Aptitude Test or the Medical College Admission Test at least a year in advance of the date of entry to professional school, and follow with applications to the professional schools of their choice. Early in the junior year, the student should seek information from the chairman of the Pre-Health Advisory Committee concerning procedures to follow to obtain the necessary committee evaluation and recommendation to professional school. Forms and instructions are available in the office of the Dean of Sciences and Mathematics. Most American medical schools recommend that medical and dental school applicants have (1) an academic year each of freshman biology, general chemistry, organic chemistry, and physics; (2) breadth in the educational experience; and (3) in-depth experience in a single discipline. Auburn University students accomplish the above by enrolling in a core of courses as outlined in the following curriculum model. Each student then elects a major from the College of Sciences and Mathematics. The College offers majors in biomedical sciences, chemistry, microbiology, physics and zoology. Students should confer with the College for specific course requirements. Students may also choose to major in a curriculum in another college or school, but they must work with the director for Pre-Health Professions in COSAM for information on the application process.

Curriculum in Pre-Dentistry and Pre-Medicine

| | | | | | |
|-------------|-------------|-------------|--|-----------|-----------|
| FR | F | S | | F | S |
| ENGL | 1100 | 1120 | English Composition I & II | 3 | 3 |
| MATH | 1610 | | Calculus I | 4 | ** |
| HIST | | 1010 | World History | ** | 3 |
| CHEM | 1110 | 1120 | General Chemistry I & II | 3 | 3 |
| CHEM | 1111 | 1121 | General Chemistry I & II Lab | 1 | 1 |
| SCMH | 1990 | | Pre-Health Orientation | 1 | ** |
| BIOL | 1020 | | Principles of Biology | 4 | ** |
| BIOL | | 1030 | Organismal Biology | ** | 4 |
| | | | | 16 | 14 |
| SO | | | | | |
| PHYS | 1500 | 1510 | Gen. Physics I & II & Labs (1501, 1511) | 4 | 4 |
| HIST | 1020 | | World History | 3 | ** |
| ENGL | 2200 | 2210 | Great Books I & II | 3 | 3 |
| CHEM | 2070 | 2080 | Organic Chemistry I & II | 3 | 3 |
| CHEM | 2071 | 2081 | Organic Chemistry I & II Lab | 1 | 1 |
| COMM | 1000 | | Public Speaking | 3 | ** |
| BIOL | | 3000 | Genetics | ** | 4 |
| | | | | 17 | 15 |

Pre-Optometry

This program leads to a Bachelor of Science degree and prepares students for the rigorous demands of American optometry schools.

Students must select a major in the College of Sciences and Mathematics or another college. The College offers majors in biomedical sciences, chemistry, microbiology, physics and zoology. Students should confer with the College for specific course requirements. Students may also choose to major in a curriculum in another college or school, but they must work with the director for Pre-Health Professions in COSAM for information on the application process.

Pre-Optometry students should write for an official bulletin from each of the professional schools of their choice during the freshman year and discuss with the Pre-Optometry adviser any special requirements of those schools. The requirements of most U.S. schools of optometry are covered in the suggested program below, either as required subjects or as electives. The student should take the Optometry Admission Test and make official application for admission to the professional schools about a year in advance of the expected date of matriculation.

Curriculum in Pre-Optometry (POPT)

| | | | | | |
|-------------|-------------|-------------|--|-----------|-----------|
| FR | F | S | | F | S |
| ENGL | 1100 | 1120 | English Composition I & II | 3 | 3 |
| MATH | 1610 | | Calculus I | 4 | ** |
| HIST | | 1010 | World History | ** | 3 |
| CHEM | 1030 | 1040 | Fundamentals of Chemistry I & II | 3 | 3 |
| CHEM | 1031 | 1041 | Fundamentals of Chemistry I & II Lab | 1 | 1 |
| SCMH | 1990 | | Pre-Health Orientation | 1 | ** |
| BIOL | 1020 | | Principles of Biology | 4 | ** |
| BIOL | | 1030 | Organismal Biology | ** | 4 |
| | | | | 16 | 14 |
| SO | | | | | |
| PHYS | 1500 | 1510 | Gen. Physics I & II & Labs (1501, 1511) | 4 | 4 |
| HIST | 1020 | | World History | 3 | ** |
| ENGL | 2200 | 2210 | Great Books I & II | 3 | 3 |
| CHEM | 2070 | 2080 | Organic Chemistry I & II | 3 | 3 |
| CHEM | 2071 | 2081 | Organic Chemistry I & II Lab | 1 | 1 |
| COMM | 1000 | | Public Speaking | 3 | ** |
| BIOL | | 3000 | Genetics | ** | 4 |
| | | | | 17 | 15 |
| JR | | | | | |
| PHIL | | 1030 | Ethics & Health Science | ** | 3 |
| PSYC | 2010 | | Introduction to Psychology | 3 | ** |
| | | | Core Social Science | ** | 3 |
| | | | Core Fine Arts | 3 | ** |
| STAT | 2510 | | Statistics for Biology & LS | 3 | ** |
| BIOL | 3200 | | Microbiology | 4 | ** |
| BIOL | | 4101 | Cell Biology Lab | ** | 2 |
| BIOL | | 4100 | Cell Biology | ** | 3 |
| BIOL | 4410 | | Vertebrate Development | 5 | ** |
| | | | | 18 | 11 |

At the end of the sophomore year, or in the fall of the junior year, the student must declare a major.

Student must either pass the computer competency test or take COMP 1000 as one of their electives.

Pre-Physical Therapy

This program prepares students applying to schools of physical therapy at the master's level and leads to a bachelor's degree in one of the majors offered in the College of Sciences and Mathematics or another college. The College offers majors in biomedical sciences, chemistry, microbiology, physics and zoology. Students should confer with the College for specific course requirements. Students may also choose to major in a curriculum in another college or school, but they must work with the director for Pre-Health Professions in COSAM for information on the application process. Students should write for an official bulletin from each of the professional schools of their choice during their freshman year and discuss with the director any special requirements of those schools.

Curriculum in Pre-Physical Therapy (PPHS)

| FR | F | S | F | S |
|-----------|------|------|--|--------------|
| ENGL | 1100 | 1120 | English Composition I & II | 3 3 |
| MATH | 1610 | | Calculus I | 4 ** |
| HIST | | 1010 | World History I | ** 3 |
| CHEM | 1030 | 1040 | Fundamentals of Chemistry I & II | 3 3 |
| CHEM | 1031 | 1041 | Fundamentals of Chemistry I & II Lab | 1 1 |
| SCMH | 1990 | | Pre-Health Orientation | 1 ** |
| BIOL | 1020 | | Principles of Biology | 4 ** |
| BIOL | | 1030 | Organismal Biology | ** 4 |
| | | | | 16 14 |
| SO | | | | |
| PHYS | 1500 | 1510 | General Physics I & II & Labs (1501 & 1511)4 | 4 |
| HIST | | 1020 | World History II | 3 ** |
| ENGL | 2200 | 2210 | Great Books I & II | 3 3 |
| PSYC | | 2010 | Introduction to Psychology | ** 3 |
| | | | Core Social Science | ** 3 |
| CHEM | 2070 | | Organic Chemistry I | 3 ** |
| CHEM | 2071 | | Organic Chemistry I Lab | 1 ** |
| COMM | 1000 | | Public Speaking | 3 ** |
| BIOL | | 3000 | Genetics | ** 4 |
| | | | | 17 17 |
| JR | | | | |
| PHIL | | 1030 | Ethics & Health Science | ** 3 |
| | | | Core Fine Arts | 3 ** |
| STAT | 2510 | | Statistics | 3 ** |
| PSYC | 2120 | | Developmental Psychology | 3 ** |
| BIOL | 2500 | 2510 | Anatomy & Physiology I & II | 4 4 |
| BIOL | 3200 | | Microbiology | 4 ** |
| | | | Psychology Elective | ** 3 |
| | | | | 17 10 |

At the end of the sophomore year, or in the fall of the junior year, the student must declare a major.
 Student must either pass the computer competency test or take COMP 1000 as one of their electives.

Pre-Pharmacy

This program meets the requirements for admission to the Auburn University School of Pharmacy, which is fully accredited by the American Council on Pharmaceutical Education. Complete information about the professional curriculum in pharmacy may be found in the School of Pharmacy section.

To be considered for admission, the applicant must complete the basic two-year requirements below and must have a 2.5 (C) GPA based on all courses attempted as well as a 2.5 (C) science index (GPA on the biological and physical science courses and mathematics). A grade of D in any required course will not be accepted.

Curriculum in Pre-Pharmacy (PPHR)

| FR | F | S | F | S |
|------|------|------|---|--------------|
| HIST | 1010 | 1020 | World History | 3 3 |
| MATH | 1610 | | Calculus I | 3 ** |
| ENGL | 1110 | 1120 | English Composition I & II | 4 3 |
| CHEM | 1030 | 1040 | Fundamental of Chemistry I & II | 3 3 |
| CHEM | 1031 | 1041 | Fundamental of Chemistry I & II Lab | 1 1 |
| | | | Core Fine Arts | ** 3 |
| BIOL | 1020 | | Principles of Biology | 4 ** |
| PHIL | | 1030 | Ethics & Health Sciences | * 3 |
| SCMH | 1990 | | Pre-Health Prof. Orientation | 1 ** |
| | | | | 19 16 |

| SO | F | S | F | S |
|------|------|------|---|--------------|
| ENGL | 2200 | 2210 | Great Books I & II | 3 3 |
| | | | Core Social Science Group 1 & 2 | 3 3 |
| PHYS | 1500 | | General Physics I & Lab (1501) | 4 ** |
| CHEM | 2070 | 2080 | Organic Chemistry I & II | 3 3 |
| CHEM | 2071 | 2081 | Organic Chemistry I & II Lab | 1 1 |
| STAT | | 2510 | Statistics for Biology & Health Science | ** 3 |
| BIOL | 2500 | | Anatomy/Physiology I | 4 ** |
| | | | | 18 13 |

Student must either pass the computer competency test or take COMP 1000 as one of their electives.

Pre-Veterinary Medicine

Students in the Pre-Veterinary Medicine (PVET) curriculum must select a major by the end of their sophomore year. Students in Sciences and Mathematics may select microbiology (MICB, PVET) or zoology (ZOO, PVET) as majors. Pre-Veterinary options in the College of Agriculture include animal and dairy science (ANDS, PVET) and poultry science (POUL, PVET). A pre-vet option in wildlife (WILD, PVET) sciences also exists in the School of Forestry and Wildlife Sciences. The minimum requirements for admission to the College of Veterinary Medicine at Auburn University are incorporated into the curriculum models for all these majors.

It is possible to gain admission to the College of Veterinary Medicine by completing only the minimum requirements listed. However, it is preferable to select a major and earn a baccalaureate degree. If a student is admitted to the College of Veterinary Medicine prior to completion of the full four years, he or she may obtain a B.S. degree by successfully completing the first three years of some of the Pre-Veterinary curricula and the first year of veterinary school. Students should consult their advisers regarding which curricula offer this option.

Application for admission to the College of Veterinary Medicine must be submitted to the Dean of that College. A minimum GPA of 2.5 is required for application; D grades in required courses are unacceptable. All minimum requirements, including courses repeated due to time limitations, must be completed by the end of the spring term preceding the date of admission, and all advanced required courses in physical and biological sciences (organic chemistry and physics) must have been completed within six calendar years prior to the anticipated entrance date. Competition for admission to the professional schools is keen with the number of qualified applicants exceeding the number of places available. For additional information, see College of Veterinary Medicine section and the Pre-Veterinary Medicine curricula in the College of Agriculture.

Curriculum in Pre-Veterinary Medicine (PVET)

| FR | F | S | F | S |
|-----------|------|------|---|--------------|
| MATH | | 1150 | Pre-Calculus Algebra & Trigonometry | 4 ** |
| | | | Core History | ** 3 |
| ENGL | 1110 | 1120 | English Composition I & II | 3 3 |
| BIOL | 1020 | | Principles of Biology | 4 ** |
| BIOL | | 1030 | Organismal Biology | ** 4 |
| CHEM | 1030 | 1040 | Fundamentals of Chemistry I & II | 3 3 |
| CHEM | 1031 | 1041 | Fund of Chemistry I & II Lab | 1 1 |
| | | | Elective | ** 3 |
| | | | | 15 17 |
| SO | | | | |
| ENGL | 2200 | 2210 | Great Books I & II | 3 3 |
| | | | Core History | 3 ** |
| | | | Core Philosophy | ** 3 |
| | | | Core Social Science | 3 ** |
| | | | Core Fine Arts | 3 ** |
| CHEM | 2070 | 2080 | Organic Chemistry I & II | 3 3 |
| CHEM | 2071 | 2081 | Organic Chemistry I & II Lab | 1 1 |
| BIOL | | 3000 | Genetics | ** 4 |
| | | | | 16 14 |
| JR | | | | |
| PHYS | 1500 | 1510 | General Physics I & II | 4 4 |
| | | | Core Social Science | ** 3 |
| BCHE | 3200 | | Principles of Biochemistry | 3 ** |
| BIOL | | 3200 | Microbiology | ** 4 |
| COMM | 1000 | | Public Speaking | 3 ** |
| COMP | | 1000 | Personal Computer Application | ** 2 |
| | | | Elective | 3 ** |
| | | | | 13 13 |

At the end of the sophomore year, or in the fall of the junior year, the student must declare a major.

Curriculum in Microbiology

Pre-Veterinary Medicine Option (MICB, PVET)

| FR | F | S | F | S |
|-------------|-------------|-------------|--|--------------|
| BIOL | 1020 | | Principles of Biology | 4 ** |
| BIOL | | 1030 | Organismal Biology | ** 4 |
| ENGL | 1100 | 1120 | English Composition I & II | 3 3 |
| CHEM | 1030 | 1040 | Fundamentals of Chemistry I & II | 3 3 |
| CHEM | 1031 | 1041 | Fundamentals of Chemistry I & II Lab | 1 1 |
| | | | Core History | ** 3 |
| MATH | 1610 | | Calculus I | 4 ** |
| | | | | 15 14 |
| SO | | | | |
| ENGL | 2200 | 2210 | Great Books I & II | 3 3 |
| PHYS | 1500 | 1510 | General Physics I & II | 4 4 |
| CHEM | 2070 | 2080 | Organic Chemistry I & II | 3 3 |
| CHEM | 2071 | 2081 | Organic Chemistry I & II Lab | 1 1 |
| BIOL | 3000 | | Genetics | 4 ** |
| BIOL | | 3200 | General Microbiology | ** 4 |
| | | | | 15 15 |
| JR | | | | |
| | | | Core Social Science Group I & II | 3 3 |
| | | | Core Philosophy | ** 3 |
| | | | Core Fine Arts | ** 3 |
| | | | Core History | 3 ** |
| BIOL | | 4100 | Cell Biology | ** 3 |
| BCHE | 3200 | | Principles of Biochemistry | 3 ** |
| BIOL | 4200 | | Clinical Microbiology | ** 4 |
| BIOL | | 4220 | Introductory Molecular Genetics | * 3 |
| BIOL | 4210 | | Microbiology Physiology | 3 ** |
| BIOL | | 4950 | Undergraduate Seminar | ** 1 |
| | | | | 16 16 |

Students who complete the above six semesters and successfully complete the first year of veterinary school may be awarded a B.S. in Microbiology. In the event the first year Veterinary College alternative is not followed, the indicated senior year courses must be successfully completed to receive the B.S. in Microbiology.

| SR | F | S | F | S |
|-------------|-------------|-------------|-------------------------------|--------------|
| BCHE | 6180 | 6190 | Biochemistry I & II | 3 3 |
| BCHE | 6181 | | Biochemistry I Lab | 1 ** |
| BIOL | | 4230 | Virology | ** 3 |
| BIOL | 6500 | | Immunology | 3 ** |
| BIOL | | 6501 | Immunology Lab | 2 ** |
| | | | Biology Elective | 3 3 |
| | | | ROTC/Free Elective | 4 4 |
| | | | | 16 13 |

Biology Electives - see adviser for approved course listing.
 Student must either pass the computer competency test or take COMP 1000 as one of their electives.

TOTAL HOURS - 120

Curriculum in Zoology

Pre-Veterinary Medicine Option (ZOOL, PVET)

| FR | F | S | F | S |
|-------------|-------------|-------------|--|--------------|
| MATH | 1610 | | Calculus I | 4 ** |
| ENGL | 1100 | 1120 | English Composition I & II | 3 3 |
| CHEM | 1030 | 1040 | Chemistry I & II | 3 3 |
| CHEM | 1031 | 1041 | Chemistry I & II Lab | 1 1 |
| | | | Core History | ** 3 |
| BIOL | 1020 | | Principles of Biology | 4 ** |
| BIOL | | 1030 | Organismal Biology | ** 4 |
| | | | | 15 14 |
| SO | | | | |
| ENGL | 2200 | 2210 | Great Books I & II | 3 3 |
| PHYS | 1500 | 1510 | Gen. Physics I & II & Labs (1501, 1511) | 4 4 |
| | | | Core Social Science Group I & II | 3 3 |
| CHEM | 2070 | 2080 | Organic Chemistry I & II | 3 3 |
| CHEM | 2071 | 2081 | Organic Chemistry I & II Lab | 1 1 |
| COMP | 1000 | | Personal Computer Application | 2 ** |
| | | | | 16 14 |
| JR | | | | |
| | | | Core Fine Arts | ** 3 |
| | | | Core History | 3 ** |
| | | | Core Philosophy | ** 3 |
| | | | Principles of Biochemistry | 3 ** |
| BCHE | 3200 | | Public Speaking | 3 ** |
| COMM | 1000 | | Genetics | 4 ** |
| BIOL | 3000 | | Evolution and Systematics | ** 3 |
| BIOL | | 3030 | Ecology | 4 ** |
| BIOL | | 3060 | Invertebrate Biodiversity or | ** 4 |
| BIOL | | 4010 | Vertebrate Biodiversity | ** 3 |
| BIOL | | 4020 | Elective | ** 3 |
| | | | | 17 16 |

Students who complete the above 6 semesters and successfully complete the first year of veterinary school may be awarded a B.S. in Zoology. In the event the first year Veterinary College alternative is not followed, the indicated senior year courses must be successfully completed to receive the B.S. in Zoology.

| SR | F | S | F | S |
|-------------|-------------|-------------|--------------------------------|--------------|
| STAT | 3010 | | Stat for Engr. & Sci | 3 ** |
| BIOL | 3200 | | Microbiology | 4 ** |
| BIOL | 4100 | | Cell Biology | 3 ** |
| BIOL | | 6240 | Animal Physiology | 4 ** |
| | | | Biology Elective | 1 13 |
| | | | Elective | ** 3 |
| | | | | 15 16 |

TOTAL HOURS - 120

Biology Elective - See Adviser for approved course listing.