Biology: Preprofessional, B.S.

General Education
(see General Education Requirements for a list of approved courses)

Rhetoric and Composition: (6 hours)
- Two approved courses in rhetoric and composition

Mathematics: (3 hours)
- One approved mathematics course

Statistics: (3 hours)
- MATH 2100 - Introductory Statistics
  Students who have taken ENGR 2220, HHP 4010, MATH 3100, 4110, PSY 2010 or SOC 2500 and subsequently changed their major to Biology will have satisfied this requirement.

Natural Sciences: (7-8 hours)
- Two approved natural sciences courses, at least one including a laboratory component

Humanities and Fine Arts: (6 hours)
- Two approved humanities and fine arts courses, one from fine arts and one from either

Cultures and Civilizations: (9 hours total)
- Option A: Western Humanities I and II and one approved Non-Western Cultures and Civilizations
- Option B: World Civilizations I, II, III

Behavioral and Social Sciences: (6 hours)
- Two approved behavioral or social science courses in two different disciplines

Program Requirements
- ENGL 2820 - Scientific Writing or
- BIOL 4995r - Departmental Thesis
  Students who have taken ENGL 2810, 2880 or 2830 and subsequently changed their major to Biology will have satisfied this requirement.

- Foreign Language: Complete one year in one foreign language or equivalent through placement.
  Students with documented evidence that English is their second language as determined by the department head will meet the foreign language requirement after successful completion of ENGL 1020.

- MATH 2100 - Introductory Statistics
- MATH 1130 - College Algebra
- MATH 1830 - Calculus for Management, Life, and Social Sciences
  or
- MATH 1710 - Precalculus I
- MATH 1720 - Precalculus II
- MATH 1950 - Calculus with Analytic Geometry I
  Initial course in the Mathematics sequence is dependent upon Placement

- CHEM 1110 - General Chemistry I
- CHEM 1110L - General Chemistry I Laboratory
- CHEM 1120 - General Chemistry II
- CHEM 1120L - General Chemistry II Laboratory
- CHEM 3010 - Organic Chemistry I
- CHEM 3010L - Organic Chemistry I Laboratory
Biology courses - 40 hours including:

**Introductory Biology (all 3 courses required):**
- BIOL 1110 - Principles of Biology I
- BIOL 1120 - Principles of Biology II
- BIOL 1130 - Principles of Biology III

**Core (all 3 courses required):**
- BIOL 3060 - Ecology
- BIOL 3250 - Genetics
- BIOL 3350 - Evolution

**Survey (select 1 course):**
- BIOL 4050 - Comparative Vertebrate Zoology
- BIOL 4070 - Entomology
- BIOL 4090 - Herpetology
- BIOL 4110 - Ichthyology
- BIOL 4130 - Invertebrate Zoology
- BIOL 4140 - Mammalogy
- BIOL 4150 - Mycology
- BIOL 4170 - Ornithology
- BIOL 4180 - Plant Morphology
- BIOL 4190 - Plant Taxonomy

**Cell and Physiology (select 2 courses):**
- BIOL 4200 - Molecular Genetics
- BIOL 4210 - Introductory Animal Physiology
- BIOL 4220 - Principles of Microbiology
- BIOL 4280 - Cellular Biology
- BIOL 4340 - Human Development and Disease
- BIOL 4360 - Plant Physiology
- BIOL 4380 - Toxicology
- BIOL 4630 - Endocrinology
- BIOL 4710 - Histology
- BIOL 4740 - Virology

**Advanced Ecology and Evolution (select 1 course):**
- BIOL 4400 - Tropical Marine Ecology
- BIOL 4410 - Animal Behavior
- BIOL 4420 - Biogeography
- BIOL 4430 - Bioremediation
- BIOL 4440 - Developmental Vertebrate Embryology
- BIOL 4500 - Systematics
- BIOL 4510 - Environmental and Ecological Genetics
- BIOL 4520 - Limnology and Reservoir Ecology
- BIOL 4530 - Microbial Ecology
- BIOL 4540 - Plant Ecology

**Biology Electives:**

**Core Electives:**
- BIOL 3070 - Ecology Laboratory
- BIOL 3260 - Genetics Laboratory

**Special Topics Electives:**
- BIOL 4610r - Biology Seminar
- BIOL 4620 - Economic Botany
- BIOL 4680 - Introduction to Soil Resources
- BIOL 4720 - Immunology
BIOL 4750 - Dendrology

Biology Courses up to 40 hours:
All BIOL courses including:
BIOL 4610r - Biology Seminar (maximum 2 hours)
BIOL 4998r - Independent Studies and/or BIOL 4997r - Research (maximum 4 hours)

Additional Requirements for the Major:
- Biology electives to complete 40 earned hours in Biology.
- No more than 2 hours of BIOL 4610r (Seminar) and 4 hours of BIOL 4997r (Research) and/or BIOL 4998r (Individual Studies) may be counted as part of the 40 hours in Biology.
- A minimum 16 hours of Biology courses at the 4000-level is required.
- A minimum grade of C must be earned in BIOL 3060, BIOL 3250 or BIOL 3350 in order to take a Survey or Cell and Physiology course. See course descriptions for specific prerequisites.
- A minimum grade of C must be earned in BIOL 3060, BIOL 3250 and BIOL 3350 in order to take an Advanced Ecology and Evolution course. See course descriptions for specific prerequisites.
- Courses offered in Botany and Zoology at Gulf Coast Research Laboratory may be substituted. Approval of the department head is required.

Recommended Electives:
- CHEM 3210 - Quantitative Analysis
- CHEM 4510 - Biochemistry
- CLAS 3000 - Scientific Terminology

Additional Information and Notes
All senior level students must take a major field achievement test in biology prior to graduation.
2.0 GPA in all required major and related courses (including specified General Education courses).
Minimum of 39 hours of 3000 and 4000 level courses.
Electives to complete 120 hours.
See Degree and Graduation Requirements for additional requirements.

Licensure to Teach
Students seeking licensure to teach Biology should pursue their major through Biology: UTeach, B.S.