This major allows students the chance to study the natural world to better understand living systems—from the biochemical to genes and from cells to global biodiversity. The department has research faculty with specialties in four disciplines: marine environmental biology, molecular and computational biology, human and evolutionary biology, and neurobiology. A diversity of upper division undergraduate courses permit students to choose an emphasis in any of these four disciplines.

Opportunities for Students

- **Research**: There are numerous opportunities for students to engage in hands-on research in the labs of over 60 departmental faculty members as well as dozens of scientists on the health sciences campus.

- **Freshman Science Honors Program**: FSH allows exceptional freshmen to study in an enriched first year science sequence, featuring smaller classes and access to lectures, tours, and field trips.

- **Catalina Semester**: Spend a spring semester at USC’s Philip K. Wrigley Marine Science Center on Catalina Island.

- **Supplemental Instruction**: This academic support program provides regularly scheduled, peer-led study sessions for common Biology, Chemistry, Math, and Physics courses.

- **Study Abroad**: Spend the summer at Oxford University studying global health in developing nations, international health policy, tropical medicine, and vaccinology.

Notable Courses

- **BISC 313: Evolution and Population Genetics** — History of evolutionary thought; molecular basis for evolution; dynamics of genes in population; patterns of evolution.

- **BISC 325: Genetics** — Transmission genetics and genotype/phenotype; mapping methods; complex traits; genetics of human disease and population genetics.

- **BISC 423: Epilepsy to Ecstasy — Biological Basis of Neurological Disorders** — An examination of various neurological disorders originating from developmental signaling and/or anatomical abnormalities.

- **BISC 483: Geobiology and Astrobiology** — Relationships between microbiota and the earth environment including the hydrosphere, lithosphere, and atmosphere, with consideration of the potential for life on other planets.
Bachelor of Arts (BA) Requirements

Lower Division Requirements*

- BISC 120: General Biology — Organismal Biology and Evolution
  or BISC 121: Advanced General Biology — Organismal Biology and Evolution
- BISC 220: General Biology — Cell Biology and Physiology
  or BISC 221: Advanced General Biology — Cell Biology and Physiology
- CHEM 105: General Chemistry A & B
  or CHEM 115: Advanced General Chemistry A & B
- MATH 125: Calculus I
- PHYS 135: Physics for the Life Sciences A & B
  or PHYS 151: Fundamentals of Physics I — Mechanics and Thermodynamics
  & PHYS 152: Fundamentals of Physics II — Electricity and Magnetism

Upper Division Requirements*

- BISC 320: Molecular Biology
- BISC 325: Genetics
- BISC 330: Biochemistry
- CHEM 322: Organic Chemistry A & B
- Two (2) 300/400-level BISC courses

Additional Bachelor of Science (BS) Requirements*

- BISC 305: Introduction to Statistics for Biologists
  or MATH 208: Elementary Probability and Statistics
- Three (3) 300/400-level BISC courses, two (2) of which must have a lab component

*This information is offered as a partial overview only. For additional information, including all major requirements, please consult the USC Catalogue or http://dornsife.usc.edu/bisc. Updated as of August 2015.

**This does not represent all options in this category. For a complete list, please consult the USC Catalogue.