MAJOR IN BIOMEDICAL SCIENCES

The Major in Biomedical Sciences prepares students for a wide variety of opportunities which have a basis in cellular and molecular biology, human/animal anatomy, and physiology. In addition to enrolling in required courses, students will have opportunities to engage in elective courses and laboratory research in specialty areas of endocrinology, pharmacology, pathophysiology, neurophysiology, reproductive physiology, and cardiopulmonary physiology. In this process, students are able to tailor their educational experiences to specific career objectives. The curriculum will prepare graduates to pursue further studies in professional schools for medicine, veterinary medicine, pharmacy, dentistry, and optometry, as well as other programs such as nursing, physician assistant and physical therapy. This major will also prepare students for graduate studies in animal and human health sciences as well as for employment in a variety of innovative and developing fields in biotechnology.

The basic science curriculum meets many requirements for entrance into professional schools. Experiential learning opportunities are encouraged and could include participating in laboratory research, teaching/tutoring in selected courses, volunteer experiences and leadership positions within student club(s), study abroad, internships, and honors curriculum. These opportunities are encouraged with the student's interests and career goals as the focus.

Learning Objectives

Upon successful completion of this program, students will be able to:

1. Obtain a solid background in anatomy and physiology, and integrate knowledge from the molecular to the systemic level.
2. Demonstrate strong writing and oral communication skills.
3. Develop scientific hypotheses and experiments to test them.
4. Work effectively in groups.
5. Demonstrate effective organization, leadership, and laboratory skills.
6. Think critically and logically.

Potential Occupations

A Bachelor of Science degree in Biomedical Sciences will provide students with a variety of opportunities for further study or employment in the broad area of biomedical sciences. The coursework is designed to prepare students for health-related graduate and professional programs. Post-graduate opportunities will include additional studies in specialty areas of physiology such as neuroscience, reproductive endocrinology, cardiopulmonary, and patho-physiology. Employment opportunities can be found in government at the local, state, and national levels; research in a variety of settings such as university, industry, and private laboratories; education; administration and management; and industry such as biotechnology, pharmaceuticals, and medical devices. Students will be exposed to skill sets which are necessary in a competitive, ever changing job market.

Concentrations

The following concentrations have been converted into individual majors administered by three different departments. Students are no longer being admitted into these concentrations:

- Anatomy and Physiology (https://catalog.colostate.edu/general-catalog/colleges/veterinary-medicine-biomedical-sciences/biomedical-sciences/biomedical-sciences-major-anatomy-physiology-concentration/)
- Environmental Public Health (https://catalog.colostate.edu/general-catalog/colleges/veterinary-medicine-biomedical-sciences/environmental-radiological-health-sciences/biomedical-sciences-major-environmental-public-health-concentration/)
- Microbiology and Infectious Disease (https://catalog.colostate.edu/general-catalog/colleges/veterinary-medicine-biomedical-sciences/microbiology-immunology-pathology/biomedical-sciences-major-microbiology-infectious-disease-concentration/)

The Anatomy and Physiology Concentration is very similar to the new Major in Biomedical Sciences *(see the Requirements and Major Completion Map tabs above)*.

Interested students should visit the new Major in Environmental Public Health (https://catalog.colostate.edu/general-catalog/colleges/veterinary-medicine-biomedical-sciences/environmental-radiological-health-sciences/environmental-public-health-major/) *(administered by the Department of Environmental and Radiological Health Sciences)* and the new Major in Medical Microbiology and Infectious Disease (https://catalog.colostate.edu/general-catalog/colleges/veterinary-medicine-biomedical-sciences/microbiology-immunology-pathology/medical-microbiology-infectious-disease-major/) *(administered by the Department of Microbiology, Immunology, and Pathology)*