

BIOLOGY DEPARTMENT

The major in biology leads to a Bachelor of Science (BS) Degree. The biology major is sufficiently flexible for students to prepare for a wide variety of professional careers. Carefully supervised active learning in the form of research is a fundamental strength of the program.

The student majoring in biology may plan to enter the workplace upon graduation or continue study in graduate or professional school.

Biomedical Sciences concentration encompasses prep for pre-professional programs including: pre-chiropractic, pre-optometry, pre-physical therapy, pre-occupational therapy, pre-pharmacy, pre-physician assistant, pre-podiatric medicine, pre-veterinary medicine, pre-dentistry, pre-medicine or pre-osteopathic medicine. Frequently, pre-professional study involves a combination of majors or a major and minor. For example, many pre-medical students choose a double major in biology and chemistry.

Each of the pre-professional programs has an advisor who can provide detailed and current information about the undergraduate work which the student should pursue to provide the foundation necessary for later entry into a professional school. The student should contact the specialized advisor as early as possible. A list of advisors is available in the departmental office (LS 210).

Biology majors also may seek teacher certification at the secondary level. Interested students may obtain a written description of specific degree requirements from the appropriate education and biology advisors.

Biology students who are considering attending graduate school should take one year of a world language and should plan to take the Graduate Record Examination during the senior year.

The biology department offers several concentration areas:

- Basic Biology
- Biomedical Science
 - Pre-Chiropractic
 - Pre-Dental
 - Pre-Medical (including Osteopathic, Podiatric and Optometric)
 - Pre-Occupational Therapy
 - Pre-Pharmacy
 - Pre-Physical Therapy
 - Pre-Physician Assistant
 - Pre-Veterinary Medicine
- Environmental Biosciences
- Cellular and Molecular Biosciences (Including Forensics & Bioinformatics)
 - Pre-Medical Laboratory Science
- Biology/Chemistry Double Major
- Biology Secondary Certification

Department Goals

- To prepare students to become productive, accountable and responsible employees upon entering the work force;
- To prepare students to enter and succeed in graduate or professional schools;

- To develop in students a broad-based theoretical foundation supplemented by laboratory and field experience that allow individual observations, interpretations and applications; and
- To allow those students seeking a minor in biology to supplement and strengthen the major field of study.

Elementary Teaching

See Liberal Studies with Science concentration

Institutional & General Education

Please refer to the General Education Requirements in the *Academic Policies* section of this catalog or refer to your individual department's curriculum sheet.

Experiential Opportunities

There are many opportunities to participate in experiences that will complement and reinforce a student's academic experience. The activities may be either on- or off-campus and may be used to develop leadership and interpersonal skills. The faculty of the biology department actively encourages student participation in such activities.

Wildlife & Natural Resources Program

Majoring in The Wildlife and Natural Resources Program leads to a Bachelor of Science (BS) Degree. In addition, supporting courses and general education courses in biology are available to meet a wide range of interests, backgrounds and needs. The Wildlife and Natural Resources Program emphasizes an understanding of fish and wildlife ecology and management with practical skills obtained during laboratory and field exercises. Graduates are prepared for positions with state and federal agencies, tribal departments, conservation organizations, and higher academic degrees. Carefully supervised career planning is provided to all students.

The Wildlife and Natural Resources Program offers **Aquatic** and **Terrestrial** concentration areas, with curriculum for each meeting the certification requirements of the American Fisheries Society (AFS) or The Wildlife Society (TWS), respectively.

Graduate Programs in Natural Sciences

The College of Science and Mathematics offers Master of Science degrees in three disciplines within the Natural Sciences:

- Biology MS,
- Chemistry MS, and
- Biochemistry MS

Students completing any of these degrees will develop advanced skills in the general discipline of choice and will apply these skills in the completion of a thesis research project or internship. GRE scores of at least 300 (verbal and quantitative) based on the current GRE exam are required for regular admission to GPNS programs.

Academic Programs

Biology

Undergraduate Programs

- Biology/Chemistry Double Major, Bachelor of Science (<https://catalog.csupueblo.edu/college-of-science-technology-engineering-and-mathematics/biology-bs-biology-chemistry-double-major-concentration/>)

- Biology: 7-12 Teacher Preparation Concentration, Bachelor of Science (<https://catalog.csupueblo.edu/college-of-science-technology-engineering-and-mathematics/biology/biology-bs-7-12-teacher-preparation-concentration/>)
- Biology: Basic Biology Concentration, Bachelor of Science (<https://catalog.csupueblo.edu/college-of-science-technology-engineering-and-mathematics/biology/biology-bs-basic-biology-concentration/>)
- Biology: Biomedical Sciences Concentration, Bachelor of Science (<https://catalog.csupueblo.edu/college-of-science-technology-engineering-and-mathematics/biology/biology-bs-biomedical-sciences-concentration/>)
- Biology: Cellular & Molecular Biosciences Concentration, Bachelor of Science (<https://catalog.csupueblo.edu/college-of-science-technology-engineering-and-mathematics/biology/biology-bs-cellular-and-molecular-biosciences-concentration/>)
- Biology: Environmental Biosciences Concentration, Bachelor of Science (<https://catalog.csupueblo.edu/college-of-science-technology-engineering-and-mathematics/biology/biology-bs-environmental-biosciences-concentration/>)

Minors

- Biology, Minor (<https://catalog.csupueblo.edu/college-of-science-technology-engineering-and-mathematics/biology/biology-minor/>)

3+2 Program

- Biology 3+2 Program, Bachelor of Science/Master of Science (<https://catalog.csupueblo.edu/college-of-science-technology-engineering-and-mathematics/biology/biology-3-2-program-bs-ms/>)

Graduate Program

- Biology, Master of Science (<https://catalog.csupueblo.edu/college-of-science-technology-engineering-and-mathematics/biology/biology-ms/>)

Wildlife & Natural Resources

Undergraduate Programs

- Wildlife & Natural Resources: Aquatic Concentration, Bachelor of Science (<https://catalog.csupueblo.edu/college-of-science-technology-engineering-and-mathematics/biology/wildlife-and-natural-resources-bs-aquatic-concentration/>)
- Wildlife & Natural Resources: Terrestrial Concentration, Bachelor of Science (<https://catalog.csupueblo.edu/college-of-science-technology-engineering-and-mathematics/biology/wildlife-and-natural-resources-bs-terrestrial-concentration/>)