

BIOLOGY/EDUCATION

Biological Sciences students at Missouri S&T may earn a certificate to teach in the secondary schools of Missouri. The Missouri S&T education program promotes a balance between science and professional competence in teaching.

The teaching certification program may be completed in four academic years. However, students may elect to attend summer sessions to lighten the load during regular academic semesters. Those students pursuing a Bachelor of Arts degree in biological sciences can take the Praxis Exam and obtain a certain score to qualify for other endorsement areas aside from the certification in biology. This provides an option that may increase professional teaching opportunities.

Biology Program

Biological Sciences or biology is the study of life and living organisms. Biological Sciences embraces a vast and rapidly expanding body of knowledge:

- Biochemistry, cellular and molecular biology
- Anatomy and physiology of cells, tissues, organs and organ systems, whole organisms
- Structure, function and behavior of individuals, populations, communities, ecosystems, and the entire biosphere.

Biology draws from the physical sciences – chemistry, physics, mathematics and earth sciences, as well as the behavioral sciences, for the analysis and interpretation of life's varied processes and interrelationships.

The core curriculum for biological sciences majors consists of course work in zoology, botany, cellular biology, microbiology, genetics and ecology. Advanced courses offer greater depth, detail and specific information leading to proficiency and preparation for employment and other postgraduate activities.

Faculty members active in research teach all biological sciences courses. Classes are small, providing exceptional opportunity for discussion and individual attention. Most students participate in research projects and learn techniques that will prepare them for postgraduate opportunities. Additional training in mathematics and physical sciences, together with course work in the humanities and social sciences, provides a well-rounded educational experience.

Departmental Contact

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Teacher Education Program

The Teacher Education Program is a structured education strategy integrating classroom studies with learning through productive work experiences in a field related to a student's academic or career goals. It provides progressive experiences in integrating theory and practice.

Students interested in teaching Biological Sciences may enter the Teacher Education Program during their freshman year. The purpose of the program is to satisfy the continuing need for well-qualified teachers in Missouri schools and across the nation.

A student may earn a Bachelor of Arts degree in biological sciences from Missouri S&T and complete requirements for certification to teach in the schools of Missouri. Many surrounding states have reciprocal agreements with Missouri with respect to certification requirements. In most other states, students may obtain a temporary certificate that will allow them to teach until the requirements of that particular state are completed. (Further information regarding these states and their requirements is available upon request.) All of the course work required in this program is available on the Missouri S&T campus; student teaching and clinical experiences are arranged with the Rolla area public schools within 30 miles of the campus.

To qualify for certification, students must have a minimum ACT score of 22 as well as a 265 C-BASE score in each area, including the composite, a passing PRAXIS score and a 2.5 or greater GPA. Each student must also submit a portfolio, complete a background check and fingerprinting, and complete the courses listed on the reserve side of this fact sheet.

There are some university scholarships and loans, as well as departmental scholarships, available for education students.

Education Contact

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CURRICULUM

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| <p>Biology.....30</p> <p>Biology 102 – Introduction to Biological Sciences.....1</p> <p>Biology 111 – General Biology.....3</p> <p>Biology 112 – General Biology Lab.....2</p> <p>Biology 115 – Zoology.....4</p> <p>Biology 118 – Plant Biology.....3</p> <p>Biology 119 – Plant Biology Lab.....1</p> <p>Biology 211 – Cellular Biology.....4</p> <p>Biology 231 – General Genetics.....3</p> <p>Biology 251 – Ecology3</p> <p>History 275 – History of Science.....3</p> <p>Biology 310 – Seminar.....1</p> <p>Biology Electives.....2</p> <p>Mathematics / Physical Science.....27</p> <p>Physics 6 – Environmental Physics.....2</p> <p>Physics 8 – Environmental Physics Lab.....2</p> <p>Math 3 or above – Fundamentals of Algebra.....3</p> <p>Math/Physical Science Elective.....2</p> <p>Computer Science / Statistics.....3</p> <p>Chemistry 1 – General Chemistry4</p> <p>Chemistry 2 – General Chemistry Lab.....1</p> <p>Chemistry 3 – General Chemistry.....3</p> <p>Chemistry 4 – Introduction to Lab safety.....1</p> <p>Chemistry 221 – Organic Chemistry I.....3</p> <p>Chemistry 223 – Organic Chemistry II.....3</p> <p>Communication Skills.....9</p> <p>English 20-Exposition and Argument.....3</p> <p>English 60-Writing and Research.....3</p> <p>Speech 85-Principles of Speech.....3</p> | <p>Humanities.....12</p> <p>Art, Music or Theater6</p> <p style="padding-left: 20px;">Art 80- Art Appreciation</p> <p style="padding-left: 20px;">Music 50- Music Appreciation</p> <p style="padding-left: 20px;">Theatre 90- Theatre Appreciation</p> <p>Philosophy 5-Introduction to Philosophy.....3</p> <p>Literature.....3</p> <p>Social Sciences..... 15</p> <p>History 111-Early Western Civilization.....3</p> <p>History 112-Modern Western Civilization.....3</p> <p>History 175 or 176 – American History.....3</p> <p>Political Science 90-American Government.....3</p> <p>Psychology 50-General Psychology.....3</p> <p>Professional Requirements:26</p> <p>Education 40-Perspective in Education..... 2</p> <p>Education 174-School Organization & Admin for Elementary and Secondary Teachers.....2</p> <p>Education 216-Teaching Reading in Content Area.....3</p> <p>Education 251-Historical Foundations of Am Education.... 3</p> <p>Education 280-Teaching Methods and Skills in the Content Area.....6</p> <p>Education 298-Student Teaching Seminar.....1</p> <p>Psychology 155-Educational Psychology.....3</p> <p>Psychology 208-Psychology & Ed. Dev.....3</p> <p>Psychology 354-Psychology of the Exceptional Child.....3</p> <p>Clinical Experience:16</p> <p>Education 104-Teacher Field Experience.....2</p> <p>Education 164-Aiding Elementary, Middle, and Secondary Schools.....2</p> <p>Education 299-Student Teaching.....12</p> <p>Total 135</p> |
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Title II Report 2006-2007

The federal government this year required we report our Title II results for the 2006-2007 year. The report was submitted in April 2008. Missouri University of Science and Technology has a 100% passing rate on the PRAXIS for our completers. The state percent was 98%. A completer is one who has fulfilled all institutions guidelines to be recommended to the state for his/her teaching certificate. We have 100% of the completers teaching with 82% teaching in Missouri.