

# DEPARTMENT OF BIOLOGICAL SCIENCES

Dr. Doug McElroy, Department Chair

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The 21<sup>st</sup> Century has been called the 'Century of Biology.' Discoveries over the past 150+ years have brought us to the cusp of a deep understanding of how life on Earth originated, functions, and interacts at both the micro- and macro- scales. We have also developed tools and technologies that will enable us to transform the treatment and outcomes of disease, identify and better protect an increasingly diverse array of species, enhance our ability to produce food and other resources for the world, and increase the quality of life. The Department of Biological Sciences is dedicated to producing well-informed, scientifically literate graduates capable of applying the knowledge and skills acquired to meet these opportunities, ensure professional success, and promote lifelong learning.

The Department of Biological Sciences offers four undergraduate majors, as well as a minor program:

- B.S. in Biology with no requirement for a minor, second major, or certificate (reference number 525);
- B.S. in Biology which requires an accompanying major in Science and Mathematics Education (reference number 774);
- B.S. in Medical Laboratory Science with no requirement for a minor, second major, or certificate (reference number 5004);
- B.S. in Molecular Biotechnology with no requirement for a minor, second major, or certificate (reference number 738); and
- Minor in Biology (reference number 326).

The Department also contributes to the interdisciplinary B.S. program in Neuroscience (reference number 5013).

Undergraduate majors in the Department of Biological Sciences have the opportunity to collaborate with faculty in basic and applied research that allow them to be practitioners, not just students, of their discipline. Modern classrooms, research laboratories, and the 1600+ acre Green River Preserve provide outstanding settings for student research. The Department is also proud to house the Biotechnology Center and Center for Biodiversity Studies. These centers are integral components of the WKU Applied Research and Technology Program, a state-funded program of distinction.

The Department is also active in offering study abroad and off-campus internship experiences that allow students to go beyond the classroom. In recent years, faculty and students have traveled to South Africa, Australia, Costa Rica, and other locations around the world, while students have undertaken internships at places such as the National Institutes of Health, Mammoth Cave National Park, and medical facilities throughout the region.

Biological Sciences programs are well-suited for students interested in moving onto professional school following completion of the B.S. degree. The coursework is aligned with the prerequisite courses required by medical, dental, veterinary, optometry, pharmacy, physician assistant,

occupational therapy, chiropractic, physical therapy, and other types of professional schools as a condition for application and admission.

When planning a program of study in the Department of Biological Sciences each student must be aware of the University's academic requirements and regulations contained in "Academic Information" section of this catalog. Specific attention should be given to the subsections entitled (1) Academic Programs, (2) Colonnade Requirements, and (3) Academic Requirements and Regulations. Students should be aware that some academic programs may require additional scholastic regulations and standards not specified in the catalog. To obtain a copy of these regulations, students should contact the Department Chair at [biology@wku.edu](mailto:biology@wku.edu).

## Secondary Teaching Certification in Biology

Students who wish to be certified to teach high school biology must complete both the major in Biology (reference number 617) with a teacher education certification concentration (TCHR), and the major in Science and Mathematics Education (reference number 774). In addition to secondary certification in Biology, students may earn dual certification in Middle School Science. Interested students should contact the SKyTeach Office, Kelly Thompson Hall 1011A, 270-745-3900 or visit [www.wku.edu/skyteach](http://www.wku.edu/skyteach) (<https://www.wku.edu/skyteach/>).

## Degrees

- Biology, Bachelor of Science (525) (<http://catalog.wku.edu/undergraduate/science-engineering/biology/biology-bs/>)
- Biology, Bachelor of Science (617) (<http://catalog.wku.edu/undergraduate/science-engineering/biology/biology-bs-617/>)
- Medical Laboratory Science, Bachelor of Science (5004) (<http://catalog.wku.edu/undergraduate/science-engineering/biology/medical-laboratory-science-bs/>)
- Molecular Biotechnology, Bachelor of Science (738) (<http://catalog.wku.edu/undergraduate/science-engineering/biology/molecular-biotechnology-bs/>)

## Minor

- Biology, Minor (326) (<http://catalog.wku.edu/undergraduate/science-engineering/biology/biology-minor/>)

## Professor

Noah T. Ashley PhD (Zoology), University of Washington, 2004  
 Carl W. Dick PhD (Zoology), Texas Tech University, 2005  
 Robert U. Fischer PhD, University of South Carolina - Columbia, 1994  
 Scott A. Grubbs PhD (Biological Sciences, Ecology and Evolution), University of Pitts Pittsburgh Camp, 1997  
 Stephen H. Huskey PhD (Biological Sciences), Florida Institute Technology, 2003  
 Jarrett R. Johnson PhD (Biology), University of Missouri-Columbia, 2005  
 Rodney A. King PhD (Microbiology and Immunology), Virginia Commonwealth University, 1993  
 Douglas McElroy PhD (Zoology), University of Maine - Orono, 1992  
 Thomas K. Philips PhD (Entomology), The Ohio State University Main Campus, 1997  
 Michael E. Smith PhD (Marine Science), University of Texas at Austin, 2001  
 Ajay Srivastava PhD (Molecular Biology and Genetics), University of Alberta, 2003

### **Associate Professor**

Simran Banga PhD (Biological Sciences), Purdue University Main Campus, 2009

### **Assistant Professor**

Hilary R. Katz PhD (Integrative Biology), University of Chicago, 2018

Joseph R. Marquardt PhD (Molecular Genetics), The Ohio State University Main Campus, 2017

Jason A. Stewart PhD (Biochemistry), University of Rochester, 2009

### **Pedagogical Professor**

Kerrie L. McDaniel PhD (Plant Biology), Southern Illinois University Carbondale, 1997

### **Pedagogical Associate Professor**

Natalie J. Mountjoy PhD (Zoology), Southern Illinois University, 2014

### **Instructor II**

Michael W. Killen PhD (Microbiology), University of Kentucky, 2011

### **Senior Instructor**

Nilesh C. Sharma PhD (Science/Botany), Birhar University-India, 1992