Biological Sciences

Return to: College of Science (http://catalog.utep.edu/undergrad/college-of-science/)

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The Department of Biological Sciences offers the Bachelor of Arts (BA) degree in Biological Sciences and the Bachelor of Science (BS) degree in Biological Sciences, Cellular and Molecular Biochemistry, and Microbiology. The BS degrees in Biological Sciences have four concentrations: Biomedical Sciences, Ecology and Evolutionary Biology, 7-12 Life Science Secondary Certificate, and 7-12 Science Secondary Certification. The Department of Biological Sciences also offers several Fast Track programs: BS Biology to MS Biology, BS Biology to MS Bioinformatics, BS Biology with Biomedical Science Concentration to MBA. BS Biology with Ecology and Evolutionary Biology Concentration to MBA, BS Microbiology to MBA

Advising and Placement

All majors in the Department of Biological Sciences must be advised prior to registration. See CORE (https://www.utep.edu/science/core/) for advising.

Programs

Bachelor of Arts

• BA in Biological Sciences (http://catalog.utep.edu/undergrad/college-of-science/biological-sciences/biological-sciences-ba/)

Bachelor of Science

• BS in Biological Sciences (http://catalog.utep.edu/undergrad/college-of-science/biological-sciences/biological-sciences-bs/)
• BS in Cellular and Molecular Biochemistry (http://catalog.utep.edu/undergrad/college-of-science/biological-sciences/cellular-molecular-biochemistry-bs/)
• BS in Microbiology (http://catalog.utep.edu/undergrad/college-of-science/biological-sciences/microbiology-bs/)
• BS in Neuroscience (http://catalog.utep.edu/undergrad/college-of-science/biological-sciences/neuroscience-bs/)

Minor

• Minor in Biological Sciences (http://catalog.utep.edu/undergrad/college-of-science/biological-sciences/biological-sciences-minor/)

Fast Tracks

• BS Biology to MS Biology (http://catalog.utep.edu/undergrad/college-of-science/biological-sciences/fast-track/bs-biology-to-ms-biology/)
• BS in Biological Sciences to MS in Bioinformatics (http://catalog.utep.edu/undergrad/college-of-science/biological-sciences/fast-track/bs-biological-sciences-to-ms-bioinformatics/)
• BS in Microbiology Sciences to MS in Bioinformatics (http://catalog.utep.edu/undergrad/college-of-science/biological-sciences/fast-track/bs-microbiology-sciences-to-ms-bioinformatics/)
• BS in Biological Science With Biomedical Science Concentration to MBA (http://catalog.utep.edu/undergrad/college-of-science/biological-sciences/fast-track/bs-biological-sciences-biomedical-conc-mba/)
• BS in Biological Sciences with Ecology in Evolutionary Biology Concentration to MBA (http://catalog.utep.edu/undergrad/college-of-science/biological-sciences/fast-track/bs-biological-sciences-ecology-evolutionary-biology-conc-mba/)
• BS in Microbiology to MBA (http://catalog.utep.edu/undergrad/college-of-science/biological-sciences/fast-track/bs-microbiology-mba/)

CHAIR: Dr. Bruce Cushing (http://facultyprofile.utep.edu/default.aspx?ID=bcushing/)

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Research Interests: Human parasitic protists, Proteomics and Genomics. STEM Education and pedagogy

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Education: BS, University of Calcutta; MS, University of Calcutta; Ph D, University of Calcutta; Post-doctoral researcher, University of Pittsburgh; Post-doctoral researcher, University of California at San Diego (UCSD)

Research Interests: Cellular and molecular biology of lipids of parasitic and cancer cells. Designing and developing drugs targeting lipid metabolic pathways against Giardia.

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Research Interests: Herpetology, Conservation Biology, Biodiversity Informatics, Chihuahuan Desert Biodiversity

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Education: BS, McMaster University; Ph D, McMaster University
Research Interests: aquatic ecosystem ecology, ecology of extreme environments in the Chihuahuan Desert and the Arctic

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Research Interests: conservation, environmental policy, environmental management, wildlife disease, wildlife ecology, upland birds, wildlife management

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Education: BS, The University of Queensland; BSc Honors, The University of Queensland; Ph D, The University of Queensland; Postdoc, Michigan State University
Research Interests: plant ecology, geographic information systems, remote sensing, cyberinfrastructure, minority education, arctic science, desert ecology, biogeochemical cycling, sensors, sensor networks, environmental observatories

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Research Interests: cancer biomarker development, cancer immunology, cancer epidemiology, cancer biology

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Research Interests: Virology, positive-strand RNA viruses, RNA replication, RNA-dependent RNA polymerase, mitochondria, mitochondrial dynamics, RNA secondary structure, vaccine development, vector development

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Research Interests: Vaccine development for Chagas disease (CD) and cutaneous leishmaniasis (CL), to validate an immune-chemotherapy approach to cure chronic CD, To validate methionine aminopeptidase as drug target for CD and LC, To validate PPDK as drug target for CD, Detection of Chagas Disease and identification of the vector triatomine specie in El Paso region/TX.

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Education: BA, University of Redlands; BS, University of Arizona; MS, Washington State University; Ph D, University of Connecticut

Research Interests: Plant Evolution, Plant Systematics, Plant Invasion, Molecular Ecology, Population Genomics, Phylogeography, Australian flora, Chihuahuan Desert Flora

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Education: BS, Laval University; Ph D, Laval University

Research Interests: Role of cholesterol and nitrogen metabolism for infection and persistence of Mycobacterium tuberculosis, hemeproteins, oxidoreductases

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Education: BS, Universidad de los Andes; MS, New York University - NYU Medical Center - Sackler Institute of Graduate Biomedical Sciences; Ph D, New York University - NYU Medical Center - Sackler Institute of Graduate Biomedical Sciences

Research Interests: Virology, influenza, SUMO, Interactions established between viruses and the cellular SUMOylation system, mechanisms regulating global cellular SUMOylation

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Research Interests: Immune response to zoonotic, emerging and neglected diseases

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Research Interests: biogeochemistry, plant physiological ecology, global change biology, soil ecology, nitrogen cycling, scientific visualization

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Research Interests: Plant community ecology, Ecosystem ecology, Arctic ecology, Litter decomposition, Biodiversity-ecosystem functioning, Long-term ecological research

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Education: BS, Ursinus College; MA, University of Maryland; MS, University of Maryland; Ph D, University of Maryland
Research Interests: Cognitive and affective outcomes associated with student engagement in Course-based Undergraduate Research Experiences (CUREs), Undergraduate teaching assistants’ development of pedagogical content knowledge and teaching self-efficacy, Quantitative reasoning in the biological sciences

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Education: BS, China Agriculture University; MS, China Agriculture University; Ph D, Medical College of Wisconsin; Postdoctoral fellowship, Harvard Medical School
Research Interests: My research focuses on how bacterial pathogens cause human diseases. I am particularly interested in understanding the roles of bacterial toxins and other virulent factors in bacterial pathogenesis, and using them as model systems to understand fundamental processes of biological sciences including protein-membrane interaction, protein pore formation and membrane translocation. Current research projects: 1. Mycobacterium tuberculosis ESX-1 secreted proteins 2. Structure and function of the anthrax toxin receptors

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Research Interests: G protein-coupled receptors, Chemokines, Cell signaling, T cells, Immune responses, Molecular biology.

Research Assistant Professor

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