



BIOTECHNOLOGY

This novel program prepares students at the highest level for careers in research, development, and practical applications of the tools of biotechnology, e.g., biomolecular, biochemical, biomedical and bioengineering approaches. Biotechnology has huge potential for solving societal problems and for creating useful products, processes, and economic development. This program prepares students for the biotechnological workforce and bioentrepreneurship, and is among Tech's highest priorities.

Participating Departments: Biology, Chemistry, Psychology, Computer Science, Mathematics, Earth and Environmental Science, Engineering Management, and Chemical, Mechanical, Materials and Environmental Engineering.

nmt.edu/~biology/biotechnology.html • thomas.kieft@nmt.edu • 575.835.5612

Areas of Research

Biotechnology Intellectual Property and Commercialization
—Dr. Peter Anselmo

Hydrology at Intersection Between Ecosystems and the Hydrological Cycle
—Dr. Dan Cadol

Bioengineering, Biomimetic Materials, Soft Electronics
—Dr. Paul Calvert

Atomistic Modeling and Simulations, 2D Materials and Bio-molecular Interactions
—Dr. Pabitra Choudhury

Plasmonic Nanomaterials, Nanoparticles Biomolecular Interaction, Single Molecule Microscopy, Proton Transport Membranes
—Dr. Sanchari Chowdhury

Plant Ecology, Climate Change, Soil Science, Applied Ecology
—Dr. Ben Duval

Neuroscience —Dr. Taffeta Elliott

Drug Design and Synthesis, Modified Metallic Surfaces for Compound Separation, Uranium Removal from Drinking Water —Dr. Liliya Frolova

Extremophiles —Dr. Thomas L. Kieft

Haptic Technologies, Robotics, Dynamic Modeling—Dr. David Grow

Bioengineered Water Treatment
—Dr. Frank Huang

Graphene for Chemical Separations —Dr. Nikolai Kalugin

Biofuels —Dr. Corey Leclerc

Bioinformatics —Dr. Oleg Makhnin

Bioinformatics
—Dr. Subhasish Mazumdar

Experimental Biochemistry, DNA Damage and Anti-cancer Drugs
—Dr. Praveen Patidar

Biochemistry, Molecular Modeling
—Dr. Sally Pias

Pathogen Detection, Chemical Sensing, and Diagnostics
—Dr. Menake Piyasena

Cell and Molecular Biology, Biosensors, Anti-bacterial, Anti-cancer and Anti-parasite Drug Discovery, Biomaterials
—Dr. Snezna Rogelj

Mathematical Biology
—Dr. William Stone

Bioengineering, Drug Delivery, Biomedical Imaging
—Dr. Michaelann Tartis

Anti-cancer Drug Design and Synthesis—Dr. Rodolfo Tello-Aburto

Neuroscience, Inherited Disease, Translational Research
—Dr. Stewart Thompson

Biomechanics and Biological Fluid Dynamics —Dr. Lindsay Waldrop

Cannabis sp. Microbiome, Algal Biofuels, Algal Viruses, Bacteriophages, Genomics
—Dr. Siobhan Watkins

Graduate Student Profile



Danielle Turner is on track to earn the department's first Ph.D. in Biotechnology. Her interdisciplinary research requires working with the Chemistry (drug discovery), Materials, Chemical Engineering, Engineering Management (drug marketing), and Computer Science departments. The focus of her study, Chagas Disease, is a tropical parasitic disease spread by the triatomine insect. "I have been able to transform the un-infectious form of the parasite — readily available to researchers — into the infectious forms of the parasite without the need for insect or mammalian hosts," Turner explained. Recapitulating the entire life cycle in the lab without the need for hosts allows researchers to test drugs more quickly and efficiently.

About Our Program

Graduate students: 2

Degree Offered
Ph.D. in Biotechnology