GRADUATE SCHOOL
COLLEGE OF SCIENCES AND ARTS

EXPLORE THIS FASCINATING INTERDISCIPLINARY FIELD

BIOCHEMISTRY AND MOLECULAR BIOLOGY (PHD)

HIGH DEMAND
There is a national and international need for more researchers to address problems in the areas of human health, disease treatment, and environmental sustainability at the molecular level. Michigan Tech’s PhD in Biochemistry and Molecular Biology stresses the interdisciplinary nature of this research.

The PhD program requires a series of three core courses to ensure that students have a firm understanding of the fundamentals of biochemistry and molecular biology, including the principles underlying biochemical structure, biochemical dynamics, molecular biology, genomics, and biotechnology.

To learn more, visit www.mtu.edu/gradschool/programs/degrees/biochemistry.

WORK ACROSS BOUNDARIES
Michigan Tech has a long and rich history of research in the exciting field of biochemistry and molecular biology. Recent conceptual and technological advancements have widened the scope of what is possible to study in these fields. Currently, faculty in biological sciences, chemistry, forest resources and environmental sciences, chemical engineering, biomedical engineering, kinesiology and integrative physiology, and mathematical sciences are engaged in biomedical research, plant genomics, and other health-related biochemistry and molecular biology studies.

RESEARCH POSSIBILITIES
Research areas include: plant comparative and functional genomics, tree biotechnology, gene silencing and microRNAs, human diseases including diabetes and cancer, protein aggregation diseases and protein misfolding, and plant phosphoinositides and phytases. Researchers also explore lectins and glycoproteomics, phytoremediation, plant microbe interactions, mushroom poison resistance and butterfly wing patterns, histones and bromodomains, algal extracellular polymers, conservation, and ecological and population genetics of trees.

Graduate students in biological sciences, chemistry, and forestry publish their research in peer-reviewed scientific journals and present their work at national and international conferences.

Research is sponsored by the National Science Foundation, US Department of Energy, Michigan Tech Research Excellence Fund, US Department of Agriculture, and National Institutes of Health.

FACULTY SPOTLIGHT
Qing-Hui Chen’s research focuses on cardiovascular physiology, neurophysiology, and exercise science. He is also studying the neural mechanisms of cardiovascular diseases and metabolic disorders and the neural mechanisms of exercise training in regulating autonomic and cardiovascular function. Chen is also an adjunct assistant professor in biological sciences.

www.mtu.edu/biochemistry  www.mtu.edu/gradschool
ADMISSION REQUIREMENTS

Application deadline: Apply at least one semester in advance of projected admission. Applications are reviewed on an individual basis using a holistic approach.

All Students
- Graduate School application
- Statement of purpose
- Official transcripts
- GRE required
- Three letters of recommendation
- Bachelor’s or master’s degree in biochemistry and molecular biology or related area

International Students
- TOEFL: Recommended score of 79 iBT

FINANCE YOUR FUTURE

Earning your graduate degree is an investment in your career and your future. Here are a few financial aid opportunities you can explore as you look for ways to pay for your degree.

- Graduate teaching assistantships (GTAs), graduate research assistantships (GRAs), and fellowships are available to qualified applicants. All students admitted to the Graduate School are considered for these awards.
- Many graduate students are eligible for a new set of federal loans, up to $20,500 per academic year, as an independent student.
- Contact Michigan Tech’s Financial Aid Office at 906-487-2622 or finaid@mtu.edu for more information on financial aid opportunities.

ABOUT MICHIGAN TECH

Michigan Technological University, founded in 1885, has gained worldwide recognition for innovative education and scholarship. Michigan Tech is a leading public research university, exploring the boundaries of knowledge, developing new technologies, and preparing students to create the future for a prosperous and sustainable world. Michigan Tech offers more than fifty graduate degree programs in engineering, forestry and environmental sciences, computing, business and economics, natural and physical sciences, technology, humanities, and social sciences.

ABOUT HOUGHTON

Houghton lies in the heart of Upper Michigan’s scenic Keweenaw Peninsula. The campus overlooks the Keweenaw Waterway and is just a few miles from Lake Superior. The area’s waters and forests, including our 600-acre recreational forest adjoining campus, offer students unparalleled opportunity for outdoor recreation and relaxation. The University’s 7,000 students come from all fifty states and more than sixty nations, making the area a vibrant, multicultural community.

APPLYING IS EASY—AND FREE!

www.mtu.edu/gradschool/admissions/apply

Biochemistry and Molecular Biology

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