The University of Texas at Dallas

School of Natural Sciences and Mathematics

Master of Science in Biotechnology

Program Description

Taught by top-tier faculty at the University of Texas at Dallas, the Master of Science in Biotechnology degree program prepares students for careers in biotechnology and biomedicine and helps working professionals develop new advanced skillsets and enhance their career opportunities.

The Biotechnology master's program is designed so that students with a wide variety of academic backgrounds can succeed in core courses, take electives in specialized areas and subfields, and tailor the degree program to fit their needs, interests and career aspirations. Designed by faculty in the School of Natural Sciences and Mathematics, the Biotechnology curriculum encourages the development of cross-disciplinary knowledge, allowing students to develop additional expertise in fields such as:

- Molecular and Cell Biology
- Chemistry
- Research
- Engineering and Computer Science
- Health Care
- Management and Business Administration
- Science Education

Benefits

The Biotechnology master's program ensures that students gain a broad understanding of biotechnology and related subfields, apply their knowledge and analytical skills to create effective and novel solutions to practical problems and communicate and work effectively in collaborative environments.

Other benefits include:

- *World-Class Faculty*: The program is led by faculty of the School of Natural Sciences and Mathematics who are widely cited experts in their respective fields.
- *Comprehensive Curriculum*: Courses in the Biotechnology master's program will introduce students to new ideas, technologies, and competencies while also teaching them the skills they'll need to thrive in competitive, ever-changing industries.
- *Lab Experience*: Lab work will introduce students to state-of-the-art research techniques used to understand the molecular mechanisms of biological processes such as gene expression, protein structure and function, carcinogenesis, neurodegeneration, bacterial pathogenicity and symbioses, metabolism and signaling networks.
- *Facilities*: A cluster of buildings and research labs on the northwest side of campus comprise the over 300,000-square-foot space where students can explore the sciences including the famous Natural Sciences and Research Lab – the "mermaid building" and the Sciences Building. Opened in 2020, the 186,000-square-foot Sciences Building is home to state-of-the-art labs for advanced research in mathematical, biological, and physical sciences.
- *Location*: Situated in the greater Dallas region—recently rated by *Forbes* magazine as the #1 "Best City for Jobs"—UT Dallas provides students with easy access to employers and internship opportunities, not to mention a large and supportive alumni population.

Contact Information

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Career Opportunities

Graduates of the Biotechnology master's program have gone on to pursue professional careers in many different fields. Recent graduates have found jobs such as:

- Academic or industrial scientists and researchers
- Quality control inspectors and analysts
- College professors and teachers
- Lab technicians
- Healthcare professionals

Marketable Skills

An advanced degree in biotechnology allows the degree owners to pursue opportunities in human medical research, plant research, animal research, environmental system research at the molecular, cellular, organism, and ecosystem level. Upon successful completion of the M.S. in Biotechnology degree program, UT Dallas graduates will expand their prior training and education with specialist knowledge and advance their understanding in relevant scientific areas including, but not limited to, proteomics, genomics, and applied bioinformatics, and hands-on experience in state-of-the-art techniques in genomics and cell and molecular and cell biology.

- Broad and expansive knowledge of proteomics, genomics and applied bioinformatics
- Methodological skills in experimental and computational techniques applied to broad research questions in biotechnology
- Ability to work in teams in diverse settings
- Ability to communicate scientific ideas and concepts in oral and in written form
- Advanced ability to apply critical thinking and quantitative skills to solve complex problems

Application Deadlines and Requirements

Please take note of all application deadlines and visit the Apply Now webpage to begin the application process. See the Department of Biological Sciences graduate programs website for additional information. Fall admission only.

Applicants to the Biotechnology master's degree program should have:

- A bachelor's degree or its equivalent. All majors are considered, but those with laboratory science, mathematics, computer science, or engineering degrees are particularly encouraged to apply. In general, students will not be admitted to the Biotechnology program if they require more than two courses in order to be ready to take the program's core courses.
- A grade point average (GPA) of at least 3.0 on a 4.0 scale.
- Test Scores: A minimum GRE score of 295 (verbal plus quantitative) with a minimum of 147 for the verbal component is required. Additional standards may apply to applicants requesting Teaching Assistantships.
- International applicants must submit a TOEFL score of at least 80 on the internet-based test. Scores must be less than two years old. See the Graduate Catalog for additional information regarding English proficiency requirements for international applicants.

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