

School of Natural Sciences and Mathematics

Master of Science in Molecular and Cell Biology



Program Description

Taught by top-tier faculty at the University of Texas at Dallas, the Master of Science in Molecular and Cell Biology ensures that students develop an advanced knowledge of biochemistry, molecular biology, cell biology and quantitative biology. Housed within the Department of Biological Sciences, the master's program allows students to benefit from the department's areas of research strength:

- Biochemistry and Biophysics
- Genomics, Systems and Computational Biology
- Microbiology
- Molecular and Cell Biology
- Pathobiology (cancer, neurobiology, infectious disease)

With opportunities to conduct experimental or computational research—and with access to next-generation sequencing platforms, protein and small molecule mass spectrometry and cell imaging and sorting systems—students in the program gain expertise in state-of-the-art research methods involving gene expression, protein structure and function, carcinogenesis, neurodegeneration, bacterial pathogenicity and symbiosis, metabolism and signaling networks.

Benefits

The Molecular and Cell Biology master's program ensures that students gain a broad understanding of the field and its 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 Molecular and Cell Biology 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 fundamental and advanced concepts as well as state-of-the-art research techniques.
- *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 Molecular and Cell Biology master's program have gone on to pursue professional careers in many different organizations and industries, such as:

- Biopharmaceutical and biotechnology companies
- Research labs
- Hospitals
- Universities

Marketable Skills

An advanced degree in molecular and cell biology 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 MS in Molecular and Cell Biology 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, biochemistry, molecular biology, cell biology and computational biology. Graduates' skills include:

- Broad and expansive knowledge of biochemistry, genetics, molecular biology, cell biology and computational biology.
- Methodological skills in experimental and computational techniques applied to research questions in biology and biomedicine.
- 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.

Applicants to the Molecular and Cell Biology master's degree program should have:

- A bachelor's degree or its equivalent. Students should have a background in calculus, general physics, organic chemistry, biochemistry and general biology (including genetics and cell biology). Those interested in computation biology should have some background in mathematics and programming. Students without the requisite background knowledge may be required to take additional coursework during their first year or the preceding summer.
- 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.
- 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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