

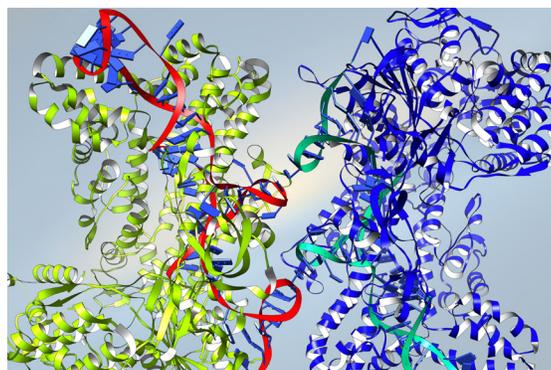
School of Natural Sciences and Mathematics

Master of Science in Bioinformatics and Computational Biology



Curriculum

The Master of Science in Bioinformatics and Computational Biology is an interdisciplinary program offered jointly by the Departments of Mathematical Sciences and Biological Sciences, with the former serving as the administrative unit. By combining coursework from the disciplines of Biology, Computer Science, Mathematics, and Statistics, it caters to the growing demand for a new breed of scientists who have expertise in all these disciplines. In addition to coursework, the program also provides opportunities to gain practical experience by getting involved in research with faculty members.



Molecular structure of the CRISPR/Cas9 system. This molecular complex is fundamental for gene editing technologies and is the focus of state-of-the-art computational studies.

The program offers a choice between two tracks. One is designed for students with a general background in science/engineering, whereas the other is designed for students with a background in biological sciences. To build further expertise, both tracks offer a choice of three elective groups, namely, computer science-oriented, statistics-oriented, and biology-oriented elective groups. Both also offer opportunities for research. Students are expected to choose a track and an elective group based on their backgrounds and interests in consultation with the graduate advisor for the program.

Scholarships are available for qualified applicants on a competitive basis.

Career Options

As mentioned in a recent article in Science (<http://www.sciencemag.org/careers/2012/04/computational-biologists-next-pharma-scientists>),

“Today, job prospects within computational biology — also known as bioinformatics — seem strong and appear to be growing, buoyed by pharmaceutical and biotech industries looking to take advantage of reams of genomics data and usher in a new era of drug discovery.”

Moreover, NIH’s current director, Francis Collins, said

“If I were a senior or first-year graduate student interested in biology, I would migrate as fast as I could into the field of computational biology...There are vast quantities of high-quality data accessible to anybody who has the skills to find the nuggets of truth that are hiding in that information.”

The Graduates of the program are expected to either pursue a doctoral program in a related field or seek employment in biopharmaceutical and biotechnology industries, research labs, hospitals, and software companies. For more information about careers in bioinformatics and computational biology, view the career page of International Society for Computational Biology at <https://www.iscb.org/bioinformatics-resources-for-high-schools/careers-in-bioinformatics>.

Degree Program

The MS in Bioinformatics and Computational Biology requires the completion of a minimum of 36 semester credit hours. For complete admission and degree requirements, view the Graduate Catalog at catalog.utdallas.edu.

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