The Master of Science in Bioinformatics and Computational Biology is an interdisciplinary program offered jointly by the Departments of Mathematical Sciences and Biological Sciences. 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.

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.

**Program Description**

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.

**Career Opportunities**

As mentioned in a recent article in *Science* (2012), “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.”

Thus, the career opportunities in bioinformatics and computational biology are aplenty. For more information about careers in bioinformatics and computational biology, view the career page of International Society for Computational Biology at:

iscb.org/bioinformatics-resources-for-high-schools/careers-in-bioinformatics.

** Marketable Skills**

Students gain expertise in the disciplines of Biology, Computer Science, Mathematics, and Statistics. They also gain practical experience by getting involved in research with faculty members. They are well prepared to pursue a career in biopharmaceutical and biotechnology industries, research labs, healthcare institutions, and software companies.

- Creative and critical thinking; specialized knowledge of bioinformatics methods, tools and practices; advanced understanding of statistical, scientific and technical language and how to use it; ability to analyze and interpret large quantities of data.
- Ability to interpret bioinformatics results in real-world terms; ability to communicate ideas of bioinformatics and computational biology to others clearly and succinctly.
- Ability to construct logical scientific arguments and conclusions with accuracy and clarity; proficiency in computer programming languages including R; ability to work on intellectual challenges.