Bachelor of Science in Bioinformatics

Program Educational Objectives and Student Outcomes

Program Educational Objectives

The graduates of the Bioinformatics program will have the following characteristics 3 to 5 years after graduation:

- Establish a successful career utilizing their education in bioinformatics or engage in advanced studies.
- Communicate effectively in both written and oral forms.
- Engage in lifelong learning to stay current with their profession as it changes.
- Demonstrate professional competence, integrity and responsibility in diverse work environments.

Student Outcomes

By the time of graduation, student outcomes should include the following.

A. An ability to extract information from different types of bioinformatics data (gene, protein, disease, ecological, environmental etc.), including their biological characteristics and relationships.
B. An ability to employ different data representation models and formats used for bioinformatics data representation.
C. An ability to apply existing approaches used for data integration and data management.
D. Master computational techniques and diversified bioinformatics tools for processing data.
E. Ability to analyze processed data with the support of analytical and visualization tools.
F. Ability to carry out bioinformatics research under advisement, including systems biology, structural bioinformatics and proteomics.
G. An ability to communicate with non-bioinformatics professionals, such as biologists and biomedical researchers, to better understand their bioinformatics needs for improved support and service delivery.
H. An ability to design and develop bioinformatics solutions by adapting existing tools, designing new ones or a combination of both.
I. An understanding of professional and ethical responsibility.
J. The broad education necessary to understand the impact of bioinformatics in a global, economic, environmental, and societal context.
K. A recognition of the need for, and an ability to engage in lifelong learning.