Bioinformatics

Program Learning Outcomes

Learning outcomes represent culminating demonstrations of learning and achievement. In addition, learning outcomes are interrelated and cannot be viewed in isolation of one another. As such, they should be viewed as a comprehensive whole. They describe performances that demonstrate that significant integrated learning by graduates of the program has been achieved.

The graduate has reliably demonstrated the ability to

1. Identify relevant evidence-based research, trends, technologies and standards within the field of bioinformatics to maintain currency in the indrustry.
2. Apply bioinformatics and computational methods to the design, execution and interpretation of scientific research.
3. Employ programming language and scripting versatility to be able to automate processes at the application level.
4. Examine bioinformatics data to discover patterns, draw conclusions and generate predictions for subsequent experiments.
5. Comply with legal obligations, as well as with the professional and ethical standards that ensure privacy, security and confidentiality in the access, retention, storage and disposal of personal genetic data and related health information.
6. Use statistics in the analysis, collation and interpretation of data to make informed decisions.
7. Perform analysis duties independently and in compliance with pertinent health and safety legislation and regulations.
8. Complete complex genomic and proteomics applications using advanced principles of cell and molecular biology, pharmacology and toxicology, pathophysiology, endocrinology, and biochemistry.
9. Collaborate and communicate with members of the inter-professional team to optimize treatment and/or experimental strategies, based on genetic profiles.
10. Develop and implement effective strategies for ongoing personal and professional development that support currency, competence and ethics in bioinformatics.
11. Understand the principles of Indigenous Knowledge.
12. Describe the relationship between Indigenous People and the Land Interconnectedness with all of Creation.
13. Analyze the Impact of Colonization of Indigenous People.
14. Evaluate Social and Political Reconciliation in Canada.