

Science, Grade 12

University/College Preparation

SNC4M

This course enables students, including those pursuing postsecondary programs outside the sciences, to increase their understanding of science and contemporary social and environmental issues in health-related fields. Students will explore a variety of medical technologies, pathogens and disease, nutritional science, public health issues, and biotechnology. The course focuses on the theoretical aspects of the topics under study and helps refine students' scientific investigation skills.

Prerequisite: Science, Grade 10, Academic, or any Grade 11 university, university/college, or college preparation course in science

Big Ideas

Medical Technologies

- Medical technologies can have positive and negative effects on society, human health, the economy, and the environment.
- Knowledge of medical technologies, and the science behind them, can help patients better understand their diagnoses and treatment options.

Pathogens and Disease

- Appropriate technologies and informed choices with respect to personal behaviour can limit the spread of pathogens and diseases.
- Methods used to control the spread of pathogens and diseases can have both positive and negative effects on human health.

Nutritional Science

- The nutrients and other substances found in foods affect human health and well-being.
- An understanding of the role of nutrients and other substances found in foods enables people to make healthy lifestyle choices.

Science and Public Health Issues

- An understanding of threats to public health helps individuals and societies adopt appropriate practices to protect their health and the health of others.
- A global approach to public health is necessary to help prevent future pandemics.

Biotechnology

- Many social, ethical, and legal issues and conflicting interests have to be considered when determining the appropriate uses of biotechnology.
- Scientific knowledge helps individuals and society make informed decisions regarding biotechnology.