

What can I do with a major in BIOLOGICAL SCIENCES?

SKILLS AND KNOWLEDGE THAT BIOLOGICAL SCIENCES GRADUATES POSSESS:

- ability to conduct scientific research and apply it to a variety of industries
- knowledge of and ability to use laboratory skills
- ability to collect, analyze and present data in both written and oral forms
- knowledge and appreciation of what biological life is and the forms that it comes in
- ability to analyze problems and apply innovation in solving them

It is important to enhance and diversify your skills and knowledge with work, volunteer, research and field study experiences while in school.

EXAMPLES OF CAREER PATHS in the Molecular or Environmental Streams BIOLOGICAL SCIENCES GRADUATES HAVE PURSUED:

Biology graduates can pursue a variety of career paths, including those that might not seem to have a direct connection to biology at first glance. The following is a non-exhaustive list of some examples:

DIRECT career paths: The skills and knowledge acquired in a biology education are often required in the following positions.	LESS DIRECT career paths: The skills and knowledge acquired in a biology education are often pertinent in the following positions.	The following paths require FURTHER STUDY or SPECIALIZED TRAINING in addition to a Bachelor of Science in biological sciences.
Product Developers in Biotechnology (molecular stream) apply their scientific knowledge of microbes, biochemistry and genetics to help develop new products in the areas of human health care, agriculture, animal health care, and energy and environmental management.	Sales and Marketing Representatives (molecular and environmental streams) work for industry in the marketing, promotion and sale of biological or biomedical products. They work for manufacturers or distributors.	Bioinformaticians (molecular stream) apply information technology to manipulate and process complex biological, cellular and genetic data for research institutions, universities, health authorities and private companies.
Forensic Laboratory Analysts (molecular stream) apply their knowledge and background in laboratory science to analyze physical evidence from crime scenes to help solve crimes. They work for government departments, private laboratories, and research organizations including colleges and universities.	Policy Advisors (molecular and environmental streams) advise governments, professional associations, and biotech and natural resources companies on developing or applying legislation related to biological research and production and environmental protection.	Pharmacologists (molecular stream) conduct research to help evaluate, develop and modify drugs by studying the effects of the drugs on biological systems for pharmaceutical companies or government agencies.
Research Associates (molecular and environmental streams) assist biologists in conducting studies on microorganisms; human, animal and plant tissues and cells; plant and animal life; and ecological and environmental impacts, in university or college settings or industry.	Science Writers, Artists or Photographers (molecular and environmental streams) write articles and books, or create illustrations or photographs on science related themes. They work independently as freelancers, or for companies and organizations that produce science related materials.	Occupational Hygienists (molecular and environmental streams) identify and evaluate workplace exposures and hazards and recommend and implement controls to reduce or eliminate them. They work for companies, organizations and as consultants.
Ecologists (environmental stream) study the relationship between plants, animals and their environment and may do a range of activities from conducting field studies to carrying out environmental impact assessments for conservation organizations, provincial and federal governments, environmental consulting firms and private companies.	Museum Curators/ Science Educators (molecular and environmental streams) design exhibits, develop educational programs, teach classes and lead tours and nature hikes in science centres, museums, parks, zoos and aquariums.	Business Development Consultants (molecular and environmental streams) advise clients in the biotechnology, medical, pharmaceutical and environmental fields on how to fund, market and distribute their science related products.

<p>Conservation Officers (environmental stream) help preserve and protect natural resources; and monitor people’s activities to ensure their safety in national and provincial parks.</p>	<p>Agricultural Commodities Inspectors (molecular and environmental streams) monitor and inspect agricultural products to ensure that companies meet the governmental standards of production, storage and transportation. They work for governments or for private companies as consultants.</p>	<p>Public Health Administrators (molecular and environmental streams) work to improve the health of the community at large through advocacy, educational programming, research and community outreach. They work for governmental health agencies, not-for-profit organizations and educational institutions.</p>
<p>Reclamation Specialists (environmental stream) identify areas of contamination, erosion or any kind of disturbance to land; develop plans to reclaim the land; and inspect and monitor the land to ensure compliance to governmental laws. They work for oil and gas companies and environmental services companies.</p>	<p>Ecotourism Operators (environmental stream) take clients on tours to learn about the natural and cultural features of an area while minimizing the imprint of the tour on the natural environment.</p>	<p>Environmental Lawyers (environmental stream) advise and represent clients on environmental matters such as air and water pollution, land use concerns, agricultural issues, parks and wilderness preservation, waste disposal, resource extraction, transportation, and international issues.</p>

WANT MORE INFORMATION? CHECK OUT THE FOLLOWING RESOURCES:

Available in MacEwan University Libraries:

- Break into Biotech – *Chelsea Whyte*
- Careers in Genetics Research: Cell Biology – *Institute for Career Research*
- Careers in Focus – *J.G. Ferguson Publishing Company*

Additional Resources (Available Online)

- Alberta Society of Professional Biologists (ASPB)
- ECO Canada (Environmental Careers Organization)
- Canadian Society of Microbiologists (CSM)
- Canadian Society for Molecular Biosciences (CSMB)
- The Canadian Society of Environmental Biologists (CSEB – SCBE)
- SICB: Society for Integrative and Comparative Biology

WANT TO DISCUSS YOUR OPTIONS WITH SOMEONE?

- Book and appointment on [MacEwanLife](#) under “Career Advising and Support.”
- Talk to a [biological sciences discipline advisor](#)

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