SKILLS AND KNOWLEDGE THAT MATHEMATICAL SCIENCES GRADUATES POSSESS:

- strong logical reasoning and analytical skills
- aptitude for systematic and abstract thinking
- a methodical approach to identify patterns, relationships, trends and issues in data analysis
- excellent problem-solving skills and ability to process a large amount of data
- ability to comprehend and communicate technical concepts
- ability to select and apply appropriate mathematical models to describe and understand real world phenomena

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

EXAMPLES OF CAREER PATHS MATHEMATICAL SCIENCES GRADUATES HAVE PURSUED:

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

<table>
<thead>
<tr>
<th>DIRECT career paths</th>
<th>RELATED career paths</th>
<th>The following paths may require FURTHER STUDY or SPECIALIZED TRAINING* in addition to a Bachelor of Science in mathematical sciences.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cryptographers/Cryptanalysts use mathematical techniques to evaluate cryptographic algorithms, and provide guidance on the design and development of cryptographic systems. They typically work for CSEC (Communications Security Establishment Canada) or IT security companies.</td>
<td>Technical Writers translate complex technical information into simpler language. They shape and deliver information to meet the needs of a target audience. Utilities, IT and engineering are some of the common fields where technical writers are employed.</td>
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<tr>
<td>Management Scientists/Operation Research Analysts use mathematical modeling and information technology to develop decision support systems for decision-makers in public and private organizations. They often work for consulting firms, universities, government departments and research institutions.</td>
<td>Financial Planners develop personal financial plans for individuals and families by analyzing clients' net worth, financial resources, lifestyle preferences and goals, and making recommendations regarding how clients can achieve their financial goals. They work independently or within financial institutions.</td>
<td>Urban Planners study the social, economic, cultural, environmental, political and physical conditions of urban and rural communities, and develop plans for the overall management and protection of specific land parcels or regions. They often work for government, utilities and land development companies.</td>
</tr>
<tr>
<td>Assessors/Appraisers determine the value of land, buildings, businesses, structures and certain types of machinery and equipment for property tax purposes. They are often employed by municipal or provincial governments.</td>
<td>Securities and Commodities Traders buy and sell securities and commodities to transfer debt, capital, or risk. They establish and negotiate unit prices and terms of sale. They can work for utility companies, financial institutions, or brokerage firms.</td>
<td>Data Miners/Data Scientists explore large amounts of data to identify patterns and relationships between variables and make predictions.</td>
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<tr>
<td>Market Research Analysts gather and analyze data about customers and their responses to products and services. This information is used to improve market success. Advertising agencies, consulting firms, and corporations are some of the common employers.</td>
<td>Underwriters evaluate the risks involved in applications for insurance and, on behalf of the insurance company, decide whether or not to accept those risks. They may work for life insurance companies or general insurance companies.</td>
<td>*NOTE: Qualifications for similar jobs might vary depending on the employer. Try checking with the employer(s) you’re interested in working for to see what they require and recommend in terms of education and/or experience.</td>
</tr>
</tbody>
</table>

*NOTE: Qualifications for similar jobs might vary depending on the employer. Try checking with the employer(s) you're interested in working for to see what they require and recommend in terms of education and/or experience.
WANT MORE INFORMATION? CHECK OUT THE FOLLOWING RESOURCES:

PRINT:

Available in the CDEL office (room 7-121, City Centre Campus):

- Great Jobs for Math Majors
- Careers for Perfectionists and other Meticulous Types
- Careers for Scientific Types and Others with Inquiring Minds
- Opportunities in Insurance Careers

Available in MacEwan University Libraries:

- Great Careers for People Interested in Math & Computers
- Math at Work: Using Numbers on the Job
- On the Job Math

ONLINE:

- Society for Industrial and Applied Mathematics, Careers and Jobs Information: siam.org/careers
- Canadian Institute of Actuaries: cia-ica.ca
- Mathematical Association of America, Careers section: maa.org/careers
- Careers at Communications Security Establishment Canada: cse-cst.gc.ca/en/careers-carrieres
- Career Guide | Marketing Research Association: marketingresearch.org/career-guide
- Appraisal Institute of Canada: aicanada.ca/why-become-an-appraiser

WANT TO DISCUSS YOUR OPTIONS WITH SOMEONE?

- Book an appointment with a career advisor in the CDEL office
- Talk to a mathematical sciences discipline advisor