

What can I do with a major in APPLIED STATISTICS?

SKILLS AND KNOWLEGE THAT APPLIED STATISICS GRADUATES POSSESS:

- ability to gather, extract and analyze data
- ability to work with and teach oneself wide-ranging statistical computer software, and basic programming skills
- ability to understand and communicate statistical findings
- skills to work in a team environment and collaborate with non-statisticians
- ability to formulate and solve real-world problems through logical thinking and statistical principles
- ability to translate information into meaningful insights that help decision/policy making

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 APPLIED STATISTICS GRADUATES HAVE PURSUED:

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

DIRECT career paths: The skills and knowledge acquired in an applied statistics education are often required or considered an asset in the following positions.	RELATED career paths: The skills and knowledge obtained in an applied statistics education are considered applicable in the following positions.	The following paths may require FURTHER STUDY or SPECIALIZED TRAINING* in addition to a Bachelor of Science in applied statistics.
Data Analysts use their statistical, programming and database management skills to answer questions and solve problems to help organizations make better decisions. They work in insurance companies, higher education institutions, government, consulting firms or information technology firms.	Statistical Business Analysts assess business problems; collect, secure, and organize data; and analyze and interpret data using statistical analysis software. They visualize, translate, and present their results to senior decision-makers in companies, organizations, and government to aid business strategies and personnel decisions.	Bioinformatics Scientists develop, customize, and use software applications, analytical tools and computational approaches to study and find solutions in biology. They may design and use databases of genetic information to find ways to identify and treat human, animal, and plant diseases. They work in private companies, universities, and government.
Actuarial Analysts use statistical formulas, models, and specialized software to assess risks, estimate costs and predict future events for organizations. They report their findings to management or clients and write reports for non-specialists. They work in insurance companies, banks, financial institutions, and consulting firms. Additional training and certification may be required.	Financial Quantitative Analysts provide guidance to businesses and individuals making investment decisions. They evaluate investment opportunities and assess the performance of stocks, bonds, and other types of investments. They work primarily in security and commodity brokerages, banks and credit institutions, and insurance carriers.	Health Economist Statisticians research health care policy, systems, and interventions by determining and applying analysis techniques to evaluate costs, charges and expenditures and improve efficiency of health care delivery. They work in private businesses, government, or as independent consultants.
Mathematical Statisticians for Statistics Canada apply, adapt, and develop mathematical statistical methods or survey methods to collect and analyze data from many aspects of Canada's economy and society. Working in multidisciplinary project teams, they may conduct theoretical studies, empirical simulations, and research.	Research Assistants/Associates assist their supervisors in planning, organizing, and conducting research in natural sciences, social sciences, management sciences, business, economics, and the arts. With a statistics degree, they primarily work in research labs in universities, hospitals, profit or non-profit organizations, and government agencies.	Biostatisticians apply statistical tools in medicine and public health to study disorders, disease, or other health risks. They present their findings to various agencies or employers to facilitate policy and decision making. They work in universities, hospitals, health agencies, government agencies, pharmaceutical companies, and medical corporations.
Statistical Programmers create computer software that can be used to collect, analyze, and report information from large databases. They commonly use the analytic software, Statistical Analysis System (SAS), which requires additional training and certification. They work in government, private companies, and research organizations.	<i>*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.</i>	Financial Advisors apply statistical models, probability theory, and financial principles to develop personal financial plans by analyzing clients' net worth, financial resources, lifestyle preferences and goals; and make recommendations on how clients can achieve their financial goals. They work independently or within financial institutions.

WANT MORE INFORMATION? CHECK OUT THE FOLLOWING RESOURCES:

Available in MacEwan University Libraries:

- Data Analyst: careers in data analysis – *Rune Rasmussen, Harish Gulati, Charles Joseph, Clare Stanier & Obi Umegbolu*
- A longitudinal analysis of job skills for entry-level data analysts – *Dong Tianxi & Jason triche*
- A career in applied mathematics – *Greg Lewis*
- A conversation on health research collaborations and career with Dr. Gordon Guyatt: a commentary – *Isabelle Johansson, Leen Naji, Myanca Rodrigues, Kishore Kumar Akula, Zheng Jing Hu, Jeffrey Kay, Lehana Thubane & Gordon Guyatt*
- The million-dollar financial advisor: powerful lessons and proven strategies from top producers – *David J. Mullen Jr.*
- How does the economy shape the financial advisory profession? – *Kelvin K.F. Law, Luo Zuo*
- A Career in Statistics: beyond the numbers – *Gerald J. Hahn, Necip Doganaksoy & Carol Joyce Blumberg*

Additional Resources (Available Online)

- Statistical Society of Canada (SSC)
- The Canadian Applied and Industrial Mathematics Society
- SIAM: Society for Industrial and Applied Mathematics
- Mathematical Association of America (MAA)
- American Statistical Association
- RSS: Royal Statistics Society
- Canadian Institute of Actuaries (CIA)
- Society of Actuaries
- Casualty Actuarial Society (CAS)
- Mathematical Statisticians at Statistics Canada (MA)
- ECO Canada
- International Society for Clinical Biostatistics (ISCB)
- IIBA Analytics Special Interest Group
- ADVOCIS (Financial Advisors Association of Canada) website

WANT TO DISCUSS YOUR OPTIONS WITH SOMEONE?

- Book an appointment with on [MacEwanLife](#) under “Career Advice and Support.”
- Talk to an [applied statistics advisor](#)

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