Succeed in the workplace

What employers want
The Canadian Council of Chief Executives list the top 6 skills sought by employers as:
1. People skills
2. Communication skills
3. Problem-solving skills
4. Analytical abilities
5. Leadership skills
6. Industry-specific knowledge

Take the time to think about the unique skills you have developed at Queen’s, starting with the skills list here for ideas. Exploring your strengths with compelling examples will be important for applications to employers and further education. For help, check out the Career Services skills workshop.

How can I learn studying MATHEMATICS AND STATISTICS?
• Logical reasoning and problem solving to apply analytical and critical reasoning to solve problems
• Ability to solve problems by applying analytical and critical reasoning
• Understand strong evidence to produce trustworthy data and provide mathematical evidence for conjectures and generalizations
• Knowledge of a broad range of mathematical fields and methods
• Ability to create mathematical models
• Pattern recognition to explore examples and recognize patterns
• Perseverance to approach problem solving with openness and a willingness to try multiple approaches
• Oral and written communication to communicate quantitative ideas with clarity and coherence through writing and speaking

Get to know MATHEMATICS AND STATISTICS
Mathematicians seek out patterns, construct rigorous arguments, articulate assumptions, appreciate the value of a precise definition, analyze mathematical models, and create beautiful structures. Statisticians produce trustworthy data, extract meaning and draw practical conclusions from data, test theories, provide mathematical evidence, and critique the reasoning of others. In both cases, these skills have a surprising ability to help make sense of the physical, biological, artistic, psychological, economic, social, and philosophical worlds. As a consequence, quantitative expertise is in high demand on the job market. Moreover, rankings of occupations invariably list multiple careers in mathematics and statistics among the very best.

Queen’s ADMISSIONS
Students apply to either Queen’s Science (QS) or Queen’s Arts (QA) through the OUAC (Ontario Universities Application Centre) website (ouac.on.ca). Secondary School prerequisites include English 4U, Advanced Functions 4U, Calculus 4U, plus two of Biology 4U, Chemistry 4U or Physics 4U.

Degree OPTIONS
Bachelor of Science (Honours)
Mathematics or Statistics / Minor in Mathematics, Mathematical Physics
Bachelor of Computing (Honours)
Specialization in Computing and Mathematics
Bachelor of Arts (Honours)
Mathematics or Statistics / Minor in Mathematics or Statistics
Bachelor of Science (General)
Mathematics or Statistics
Bachelor of Arts (General)
Mathematics or Statistics
Internship option available

A Common START
Students in our Faculty are admitted into Arts, Science or Computing but the focus is on a common first year. Through self-exploration, and while you settle into university life, you have the chance to work with our advisors and faculty to uncover where your real interests and opportunities for success are. Sometimes that discovery happens fairly quickly, and for other students it takes some work and time before the “ah-ha!” happens – either way your first year at Queen’s will be a great experience.

Course HIGHLIGHTS
Mathematics and Statistics courses are taught to students throughout the university, not just in Arts and Science. Popular upper-level courses include Computational Data Analysis, Evolutionary Game Theory, Group Theory, Life Contingencies, Modeling Techniques in Biology, Real Analysis, and an Introduction to Coding Theory.

That is a degree from Queen’s.
1ST YEAR

GET THE COURSES YOU NEED

In first year take MATH 1106(6.0) and 1206(6.0). *

*In certain situations other possibilities exist—talk to the Undergraduate Chair, if you need to explore other options.

Each Plan will have at least one required first-year course, including minors. It is important to take a variety of first-year courses to keep as many pathways open as possible for you going into second year. For details see the Arts and Science Academic Calendar.

GET RELEVANT EXPERIENCE

Join teams or clubs on campus such as the Queen’s Math Club, Putnam team, and the Math Investigations Program.

See the AMS Clubs Directory or the Queen’s Get Involved page for more ideas.

GET CONNECTED WITH THE COMMUNITY

Volunteer on or off campus with different community organizations such as Best Buddies.

Get involved with the Mathematics and Statistics Departmental Student Council (DSC).

Do targeted networking with alumni working in careers of interest by joining the LinkedIn group Queen’s Connects. Check out Career Services networking workshops. Connect with professors at events or workshops hosted by the DSC.

GET THINKING GLOBALLY

The Queen’s University International Centre is your first stop to learn how to internationalize your degree or to leverage your existing cross-cultural experience.

Speak to a QUIC advisor or get involved in their programs, events and training opportunities.

GET READY FOR LIFE AFTER GRADUATION

Grappling with program decisions? Go to Majors Night or get some help wondering about career options from Career Services.

Explore different careers of interest by reading books in the Career Services Career Advising and Resource Area, such as the Great Jobs for Math Majors. For more information check out Career Cruising or by finding and connecting with alumni on LinkedIn.

2ND YEAR

IN second year take MATH 2803(3.0), 2813(3.0), STAT 260(3.0) and 269(3.0). If possible, also take MATH 210(3.0) and MATH 23(3.0).

Please see the Academic Calendar to ensure you are taking the correct courses.

Want to enhance your degree? Consider a certificate in Geographical Information Science or explore other certificates available.

3RD YEAR

IN third year take 15.0 units of BIOM, MATH, or STAT at the 300-level or above. Some 300- and 400-level courses are only offered in alternating years. Many 400-level courses can be taken in third year.

Need help mapping all of your core, option, supporting and elective courses (including those not listed above) to make sure you will have what you need to complete your degree? Use the Course Mapping Tool on the Arts and Science website.

4TH OR FINAL YEAR

IN fourth year take 6.0 units of BIOM, MATH, or STAT at the 400-level or above and 9.0 units of BIOM, MATH, STAT at the 300-level or above. Complete all courses in an area of focus.

By fourth year you should be working on your remaining option and elective courses. Make sure to map your minor and/or certificate(s) as well.

Apply to graduate in SOLUS.

Investigate requirements for full-time jobs or other opportunities related to careers of interest. Assess what experience you’re lacking and fill in gaps with volunteering, clubs, or internships – check out the Career Services skills workshop for help.

Consider submitting your work to an undergraduate journal like Inquiry@Queen’s.

Consider joining professional associations like the Canadian Applied and Industrial Mathematics Society, the Canadian Mathematical Society, and the Statistical Society of Canada.

Join groups on LinkedIn reflecting specific careers or topics of interest in Mathematics.

Prepare for work or studies in a multi-cultural environment by taking QUIC’s Intercultural Competency Certificate, and research possible immigration regulations.

International students interested in staying in Canada can speak with an Immigration advisor.

Where could I go after graduation?

Accounting
Actuarial science
Aerospace
Architecture
Astronomy
Auditing
Banking
Bioinformatics scientist
Biodata scientist
Communications
Computer scientist
Credit management
Cryptanalyst
Data mining
Data processing
Data scientist
Economics
Fibre and laser electro-optics
Financial analysis
Financial auditor
Financial manager
Information science
Inventory control specialist
Mathematician
Operations research analyst
Quality control manager
Quantitative analyst
Risk analyst
Security specialist
Software developer
Statistician
Survey researcher

Some careers may require additional training.

Visit careers.queensu.ca/majormaps.html for the online version with links!