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.

“One of two founding programs of Queen’s University, a proud history dating back to 1842.”

**Degree OPTIONS**

- Bachelor of Science (Honours)
  - Major in Mathematics or Statistics / Minor in Mathematics or Statistics / Specializations in Biology and Mathematics, Mathematical Physics
- Bachelor of Computing (Honours)
- Bachelor of Arts (Honours)
- 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.

**Acquire Skills. Gain Experience. Go Global.**

That is a degree from Queen’s.

quartsci.com
Mathematics and Statistics MAJOR MAP

BACHELOR OF SCIENCE (HONOURS) (SPECIALIZATION, MAJOR, MINOR) | BACHELOR OF COMPUTING (HONOURS) (SPECIALIZATION) | BACHELOR OF SCIENCE (GENERAL) | BACHELOR OF ARTS (HONOURS) (MEDIAL, MINOR) | BACHELOR OF ARTS (GENERAL)

**1ST YEAR**
- In first year take MATH 110(6.0) and 120(6.0).
- Take MATH 280(3.0), 281(3.0), STAT 268(3.0) and 269(3.0). To do this, 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 Geographic Information Science or explore other certificates available.

**2ND YEAR**
- In second year take MATH 280(3.0), 281(3.0), STAT 268(3.0) and 269(3.0). To do this, also take MATH 210(3.0) and MATH 23(3.0).
- 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.

**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.
- New career opportunities arise. Consider making a plan for what you would like to study abroad. Apply in the proper year.

**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.

Visit careers.queensu.ca/majormaps.html for the online version with links!
Mathematics and
Statistics
MAJOR MAP

How to use this map
Use the 5 rows of the map to explore possibilities and plan for success in the five overlapping areas of career and academics. The map just offers suggestions – you don’t have to do it all! To make your own custom map, use the My Major Map tool.

A balanced approach leads to long-term success. While you will learn a lot from your studies, taking time to get relevant experience outside of the classroom, build your network, and gain international experience, will position you to be more competitive in your job search or grad school applications.

Get started thinking about the future now – where do you want to go after your degree? Having tentative goals (like careers or grad school) while working through your degree can help with short-term decisions about courses and experiences, but also help you keep motivated for success.

Get the help you need
Queen’s provides you with a broad range of support services from your first point of contact with the university through to graduation. At Queen’s, you are never alone. We have many offices dedicated to helping you learn, think and do.

Ranging from help with academics and careers, to physical, emotional, or spiritual resources – our welcoming living and learning environment offers the programs and services you need to be successful, both academically and personally, and Queen’s wants you to succeed! Check out the Student Affairs website for available resources.

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

What 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
- Persistence 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

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