Mathematics

Mathematicians discover and study structures that are fascinating in themselves and that have a surprising ability to help us make sense of many facets of the world: the physical, the biological, the economic, the artistic, the psychological, and the philosophical. By designing and analyzing mathematical models, we increase our understanding of natural processes and human events.

TOP 5 REASONS to study MATHEMATICS

1. Mathematical thinking develops logical reasoning skills that will help in analyzing 'real-world' problems.
2. According to Galileo, mathematics is the language of science and hence essential for all scientific study.
3. Our digital age requires training in the STEM subjects, of which mathematics is an essential part.
4. Mathematics develops the imaginative faculty and has the aesthetic quality of the humanities.
5. The concepts and skills that are gained in the study of Mathematics help you to analyze complex systems.

Alumni Story

Rhodes Scholar Nithum Thain completed his BScH in Math, scoring a perfect GPA while being the captain of the fencing team at Queen's, where he won two provincial gold medals. He has enjoyed a wide range of professional opportunities – starting off at Empire Avenue as the VP of Research, working on the algorithms that ran their online gaming platform, and followed by working as a Business Development Analyst at createLIVE.

TOP ALUMNI JOBS

- 7% of alumni work in GOVERNMENT
- 10% of alumni work in TECHNOLOGY
- 17% of alumni work in BANKING, INVESTMENT & INSURANCE
- 33% of alumni work in EDUCATION

add a CERTIFICATE

- Data Analytics
- Disability and Physical Activity
- Geographic Information Science
- Indigenous Languages and Cultures
- International Studies
- Sexual and Gender Diversity
- Urban Planning Studies

QUartsci.com/certs

2024-25 Plan Thresholds

Thresholds are made on a competitive basis and are updated annually. To see the thresholds for all programs as well as the latest information, please visit quartsci.com/planselection.

Interested in finding out how to augment your degree with Experiential Learning? Learn what opportunities and resources are available for you on the Experiential Learning website. You can also reach out to the team directly at asc.el@queensu.ca.

Acquire Skills. Gain Experience. Go Global.

That is a degree from Queen's.

queensu.ca/mathstat

2024-2025

Mathematics MAJOR MAP

BACHELOR OF SCIENCE (HONOURS): MAJOR, JOINT HONOURS, MINOR, SPECIALIZATION

Queen's UNIVERSITY

	1ST YEAR	2ND YEAR	3RD YEAR	4TH OR FINAL YEAR
GET THE COURSES YOU NEED	In first year you will have the chance to explore the foundations of Mathematics along with some electives. Attend Majors Night in the Winter term to learn more about Plan options. Interested in getting a head start in learning and working in a digital world? Take ASCX 150 and develop future-ready skills!	Start going deeper into the discipline of Mathematics, while considering a minor and/or certificate such as Entrepreneurship, Innovation and Creativity. Learn more about Certificates and Internship options. Want to make sure your academics are where you want them to be? Visit SASS (Student Academic Support Services) and the Writing Centre for some help.	A chance to start grouping courses in areas of interest, or to keep it more general and explore many areas of Mathematics. Meet with an Academic Advisor to make sure you are on track and have planned out your courses for next year.	In fourth year you will have the chance to participate in research-based courses that can lead to Graduate School or to your future career path. Make sure to finish up all your courses for your major and your optional minor and/or certificate(s).
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.	Look into summer jobs by talking to the dept. or Career Services about work through SWEP or NSERC. Take more responsibility within different clubs or extracurriculars.	Consider applying to do a 12-16 month QUIP internship between your third and fourth year. Consider entrepreneurial opportunities via programs like the Queen's Innovation Connector Summer Initiative (QICSI).	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.
GET ENGAGED 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.	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.
GET ENGAGED GLOBALLY	Prepare for work or studies in a multi-cultural environment by taking QUIC's Intercultural Competency Certificate, and research possible immigration regulations. Speak to a QUIC advisor to get involved in their programs, events, and training opportunities.	Is an exchange in your future? Start thinking about where you would like to study abroad. Apply in January for a third year exchange through the International Programs Office. Apply for the Math in Moscow Scholarship or the Budapest Semesters in Mathematics.	Build your intercultural competence by getting involved with other cultures or by practicing or improving your language skills.	International students interested in staying in Canada can speak with an International Student Advisor.
GET CAREER READY	Grappling with program decisions? Go to Majors Night or get some help wondering about career options from Career Services. Build your transferable skills in time management, problem-solving, writing, and more with Student Academic Success Services.	Explore different careers of interest in the Career Services Career Advising and Resource Area. For more information check out Career Cruising or by finding and connecting with alumni on LinkedIn.	Start focusing on areas of interest. Research any further education requirements for careers of interest. If needed, prepare to take any required tests (like the LSAT or GMAT) and get help thinking about Grad School from Career Services.	Apply to jobs or future education, or make plans for other adventures. Get help from Career Services with job searching, resumes, interviews, Grad School applications, or other decisions.

CONSIDER A 12-16 MONTH QUIP INTERNSHIP

Knowledge & Workplace Skills

A degree in Math can equip you with:

- 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
- Ability to work independently and in a team on a project
- Oral and written communication to communicate quantitative ideas with clarity and coherence through writing and speaking

Career Possibilities

A degree in Math can take your career in many directions. Many students choose to continue their academic inquiry with a Master's. Our students are equipped with a strong foundation for careers in:

- Accounting
- Aerospace
- Auditing
- Banking
- Cryptanalysis
- Data science
- Education
- Financial analysis
- Mathematician
- Risk analysis

Taking time to explore career options, build experience, and network can help you have a smooth transition to the world of work after graduation.

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.

Mathematics

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. Queen's wants you to succeed! Check out the Student Affairs website for available resources.

QUIP QUEEN'S UNDERGRADUATE INTERNSHIP PROGRAM

START DATES in May, September, or January

POSITIONS are paid and full-time

WORK TERMS are 12-16 months long

PROGRAM OVERVIEW

- Graduate with a "Professional Internship" degree
- Learn about current advances, practices and technologies in business and industry.
- Test drive a career, earn a competitive salary, and get real world experience.

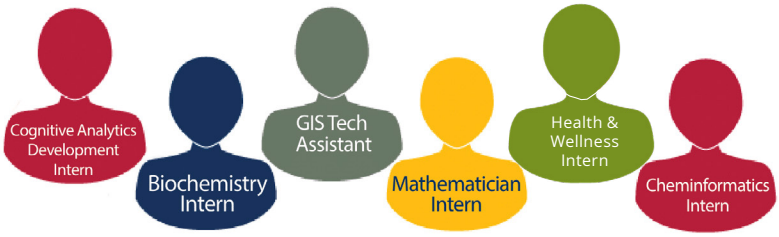
ELIGIBILITY

- 2nd or 3rd Year Students
- Minimum GPA of 1.9

WHY QUIP?

- Gain a year of career-related work experience.
- Build network connections.
- Receive support from Queen's staff in job search and during internship.

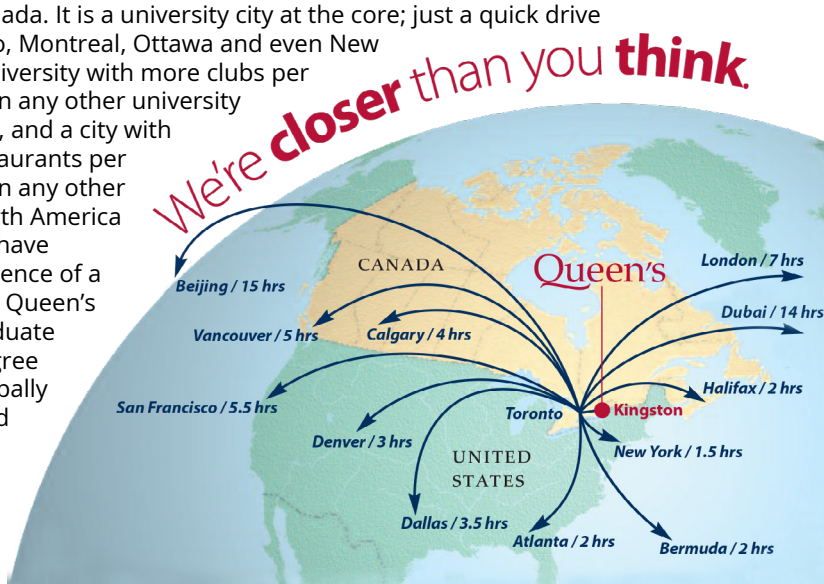
SAMPLE PAST INTERNSHIPS



For more information, contact quip@queensu.ca or visit the Program Website.

Why study in Kingston?

Since 1841, our community has been more than a collection of bright minds – Queen's has attracted students with an ambitious spirit. Queen's has the highest retention rates, the highest graduation rates, and one of the highest employment rates among recent graduates. We are a research intensive university focused on the undergraduate experience. The BBC has identified Kingston as one of the GREATEST UNIVERSITY TOWNS in the world – and it is often awarded the safest city in Canada. It is a university city at the core; just a quick drive to Toronto, Montreal, Ottawa and even New York. A university with more clubs per capita than any other university in Canada, and a city with more restaurants per capita than any other city in North America – you will have the experience of a lifetime at Queen's – and graduate with a degree that is globally recognized among the best.



Queen's University ARTS AND SCIENCE

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