**Mathematics**

**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 offers suggestions – you don’t have to do it all! To make your own custom map, use the My Major Map tool.

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 motivated for success.

**Why study in Kingston?**

For over 175 years, 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 psychological, and the philosophical. By designing and analyzing mathematical models, we increase our understanding of natural processes and human events.

**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.

**Why study Mathematics?**

Mathematical thinking develops logical reasoning skills that will help in analyzing ‘real-world’ problems. According to Galileo, mathematics is the language of science and hence essential for all scientific study.

Our digital age requires training in the STEM subjects, of which mathematics is an essential part.

Mathematics develops the imaginative faculty and has the aesthetic quality of the humanities.

Mathematics teaches skills and insights needed to succeed in the ever-changing workplace.

**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. Mathematics teaches skills and insights needed to succeed in the ever-changing workplace.

**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

**2019-20 major thresholds**

<table>
<thead>
<tr>
<th>Field</th>
<th>AUTOMATIC ACCEPTANCE</th>
<th>THRESHOLDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>C+ in MATH 114</td>
<td>0.7</td>
<td>PENDING LIST</td>
</tr>
</tbody>
</table>

**For more information, contact quip@queensu.ca or visit the Program Website.**
**Bachelor of Science (Honours): Specialization, Major, Minor**

**2019-2020 Graduation Globally Get Thinking Community Get Connected Experience Get Relevant You Need**

**Mathematics MAJOR MAP**

**1ST YEAR**
- 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.

**2ND YEAR**
- Start going deeper into the discipline of Mathematics, while considering a minor and/or certificate such as Entrepreneurship, Innovation and Creativity. Attend Degree 1.5 in the Fall term to 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.

**3RD YEAR**
- 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.
- 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.

**4TH OR FINAL 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).
- 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.

**GET THE COURSES YOU NEED**
- Visit careers.queensu.ca/majormap for the online version with links!

**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.
- Putnam in the Winter term to learn more about Plan options.

**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).
- Departmental Student Council (DSC).

**GET THINKING GLOBALLY**
- Prepare for work or studies in a multi-cultural environment by taking QUIP’s Intercultural Competency Certificate and research possible immigration regulations.
- Speak to a QUIP advisor to 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.
- Build your transferable skills in time management, problem-solving, writing and more with Student Academic Success Services.

**FIND A 12-16 MONTH QUIP INTERNSHIP**
- 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 (QIC3).

**Where can I go?**
- 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
  - Cryptanalyst
  - Data scientist
  - Financial analysis
  - Mathematician
  - Risk analyst
  - Survey researcher
- Taking time to explore career options, build experience and network can help you make a smooth transition to the world of work after graduation.

**What will I learn?**
- 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.

**Visit careers.queensu.ca/majormap for the online version with links!**

* This map is intended to provide suggestions for activities and experiences, but everyone’s abilities, experiences, and constraints are different. Build your own Major Map using our online tool.