# **Statistics**

Statistics is the science of designing informative experiments, of displaying and analyzing data, and of drawing valid conclusions from data. There is great demand for those who understand and can apply statistics effectively. Knowledge of statistical methods is useful to scientists and engineers, and to others working in government, research, industry, and medicine. Statistics can also be studied as a subject in its own right.





Statistical thinking provides us with ways of understanding data sets that will help in analyzing 'real-world' problems.

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

Our ability to collect huge amounts of data critically requires the development sophisticated ways to draw conclusions and move forward.

Statistics teaches skills and insights needed to succeed in the everchanging workplace.

 There is a huge demand for
 statisticians in academia, government, and industry.

#### 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

of alumni work in PHARMACEUTICALS

of alumni work in INSURANCE

18% of alumni work in BANKING, INVESTMENT

21% 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

## 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 <u>quartsci.com/planselection</u>

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.

QUartsci.com/certs

# Acquire Skills. Gain Experience. Go Global.

That is a degree from Queen's.

queensu.ca/mathstats

# 2024-2025 **Statistics** MAJOR MAP

BACHELOR OF SCIENCE (HONOURS): MAJOR, MINOR

	1ST YEAR	2ND YEAR	3RD YEAR	4TH OR F
GET THE COURSES YOU NEED	In first year you will have the chance to explore the foundations of Statistics along with some electives. Attend <u>Majors Night</u> in the Winter term to learn more about Plan options. Want to make sure your academics are where you want them to be? Visit <u>SASS (Student Academic</u> <u>Support Services</u> ) and the Writing Centre for some help. Interested in getting a head start in learning and working in a digital world? Take <u>ASCX 150</u> and develop future-ready skills!	Start going deeper into the discipline of Statistics, while considering a minor and/or certificate such as <u>Geographic Information Science</u> . Learn more about <u>Certificates</u> and <u>Internship</u> options.	A chance to start grouping courses in areas of interest, or to keep it more general and explore many areas of Statistics. Meet with an <u>Academic Advisor</u> to make sure you are on track and have planned out your courses for next year.	In fourth year yo participate in res can lead to <u>Grad</u> career path. Mak courses for your minor and/or cer
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 <u>SWEP</u> or <u>NSERC</u> . 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 <u>Queen's Innovation</u> <u>Connector Summer Initiative</u> (QICSI).	<ul> <li>Investigate requires or other opportures of interest. Assess lacking and fill in clubs, or internshwith a career coures consider submitted undergraduate joo Queen's.</li> </ul>
				Z
GET ENGAGED WITH THE COMMUNITY	Volunteer on or off campus with different community organizations such as <u>Best Buddies</u> .	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 <u>Queen's Connects</u> . Check out Career Services <u>networking workshops</u> . Connect with professors at events or workshops hosted by the DSC.	<ul> <li>Consider joining like the <u>Canadian</u> <u>Mathematics Soc</u> <u>Mathematical So</u> <u>Society of Canad</u> Join groups on Li careers or topics</li> </ul>
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GET ENGAGED GLOBALLY	Prepare for work or studies in a multi-cultural environment by taking <u>QUIC's Intercultural</u> <u>Competency Certificate</u> , 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 <u>study abroad</u> . Apply in January for a third year exchange through the <u>International Programs Office</u> . Apply for the <u>Math in Moscow Scholarship</u> or the <u>Budapest Semesters in Mathematics</u> .	Build your intercultural competence by getting involved with other cultures or by practicing or improving your language skills.	Linternational studin Canada can sp Student Advisor.
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GET CAREER READY	Grappling with program decisions? Go to <u>Majors</u> <u>Night</u> or get some help <u>wondering about career</u> <u>options</u> from Career Services. Build your transferable skills in time management, problem-solving, writing, and more with <u>Student Academic Success Services</u> .	Explore different careers of interest in the Career Services Career Advising and Resource Area. For more information check out <u>Career</u> <u>Cruising</u> or by finding and connecting with alumni on <u>LinkedIn</u> .	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 <u>help thinking about Grad School</u> from Career Services.	Apply to jobs or f plans for other a from Career Serv <u>resumes, intervie</u> <u>applications</u> , or c

#### 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 <u>My Major Map</u> tool.



#### FINAL YEAR

you will have the chance to research-based courses that aduate School or to your future lake sure to finish up all your our major and your optional certificate(s).

quirements for full-time jobs rtunities related to careers sess what experience you're in gaps with volunteering, nships – make an appointment counsellor for further support.

nitting your work to an e journal like <u>Inquiry@</u>

ng professional associations lian Applied and Industrial Society, the <u>Canadian</u> Society, and the <u>Statistical</u> ada.

LinkedIn reflecting specific ics of interest in Mathematics.

students interested in staying speak with an <u>International</u> <u>or</u>.

or future education, or make r adventures. Get help ervices with job searching, rviews, Grad School or other decisions.

#### Knowledge & Workplace Skills

A degree in Statistics 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 statistical evidence for conjectures and generalizations
- Knowledge of a broad range of statistical fields and methods
- Ability to evaluate and test 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 Statistics 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
- Artificial intelligence
- Banking
- Clinical trials
- Data scientist
- Financial analysis
- Risk analyst
- Statistician
- Survey researcher

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

# Statistics



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

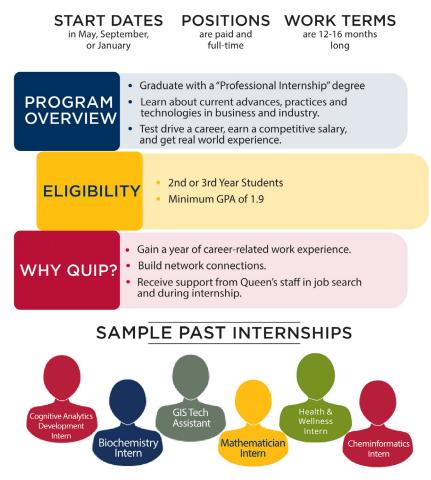
Queen's provides you with a broad range of support services from your first point of contact with the university through to graduation. At Queen's, you are never alone. We have many offices dedicated to helping you learn, think and do.

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.



Department of Mathematics and Statistics Jeffrey Hall, Room 310 48 University Avenue 613-533-2390 queensu.ca/mathstat

# **QUIP**QUEEN'S UNDERGRADUATE



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 h more closer than you think 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 London / 7 hrs the experience of a CANADA **Oueen's** Beijing / 15 hrs lifetime at Queen's Dubai / 14 hrs - and graduate Vancouver / 5 hrs Calgary / 4 hrs with a degree that is globally Halifax / 2 hrs San Francisco / 5.5 hrs Kingston recognized Toronto among Denver/3 hrs UNITED New York / 1.5 hrs the best. STATES Dallas / 3.5 hrs Atlanta / 2 hrs

Bermuda / 2 hrs