DEPARTMENT OF MATHEMATICS & STATISTICS FACULTY OF ARTS AND SCIENCE QUEEN'S UNIVERSITY

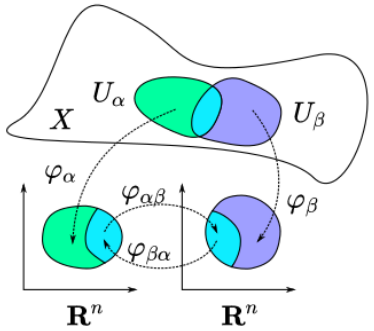
Advice for students entering second year during 2025–26

Complete information about program requirements, courses of study, and academic regulations can be found in the Faculty of Arts and Science Academic Calendar.

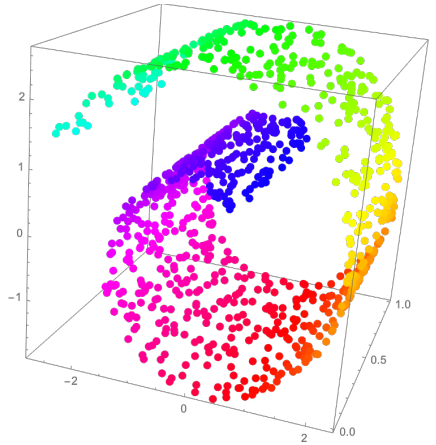
For advice about degree programs or courses, please email the Chair of Undergraduate Studies at mathstat.ugchair@queensu.ca

What is Mathematics and Statistics?

- **Mathematics:** The science of structure, order, and relation that has evolved from elemental practices of counting, measuring, and describing shapes of objects. [**Encyclopedia Britannica**]



- **Statistics:** The science of uncertainty and the technology of extracting information from data. [**International Encyclopedia of Statistical Science**]



Why study Mathematics?

- Mathematics provides a language that allows us to describe and understand the world surrounding us.
- A degree in mathematics reflects problem solving and analytical thinking skills, leading to careers in:
    - Mathematics research
    - Data science
    - Artificial intelligence
    - Computer science
    - Actuarial science
    - Economics
    - Finance
    - Cybersecurity
    - Medicine, law, etc.

Why study Statistics?

- Statistics deals with data, facts and figures from which meaningful information is inferred.
- A degree in statistics reflects skills in data analysis, interpretation and visualization. It can lead to careers in:
    - Statistics research
    - Scientific research
    - Risk analysis / consulting
    - Data science
    - Actuarial science
    - Economics
    - Epidemiology
    - Marketing
    - Medicine, law, etc.

Program Details

Mathematics and Statistics Plans

PLANS WITHIN HONOURS DEGREES

Specializations

- Biology and Mathematics (BSCH): 84.0 units
- Computing, Mathematics, and Analytics (BCMPH): 90.0 units
- Mathematical Physics (BSCH): 105.0 units
- Mathematics (BSCH): 60.0 units
  - Sub-plans: Pure Mathematics / Applied Mathematics
- Statistics (BSCH): 60.0 units

Majors

- Mathematics: 48.0 units
- Statistics: 48.0 units

Minors

- Mathematics: 30.0 units
- Statistics: 30.0 units

200-level courses

FALL 2025

Course Number	Title	Instructor (subject to change)
MATH 221	Vector Calculus	Levit
MATH 225	Ordinary Differential Equations	Lewis, TBA
STAT 252	Probability	Rodgers
STAT 268	Probability and Statistics I	Song
STAT 263	Introduction to Statistics	Molson
MATH 280	Advanced Calculus	Chiri, TBA

WINTER 2026

Course Number	Title	Instructor (subject to change)
MATH 210	Rings and Fields	Smith
MATH 212	Linear Algebra II	TBA
MATH 225	Ordinary Differential Equations	Mansouri
MATH 228	Complex Analysis	TBA
STAT 263	Introduction to Statistics	Molson
STAT 269	Probability and Statistics II	Ling
MATH 281	Introduction to Real Analysis	Barthelmé, TBA

300-level courses that can be taken along with 200-level courses

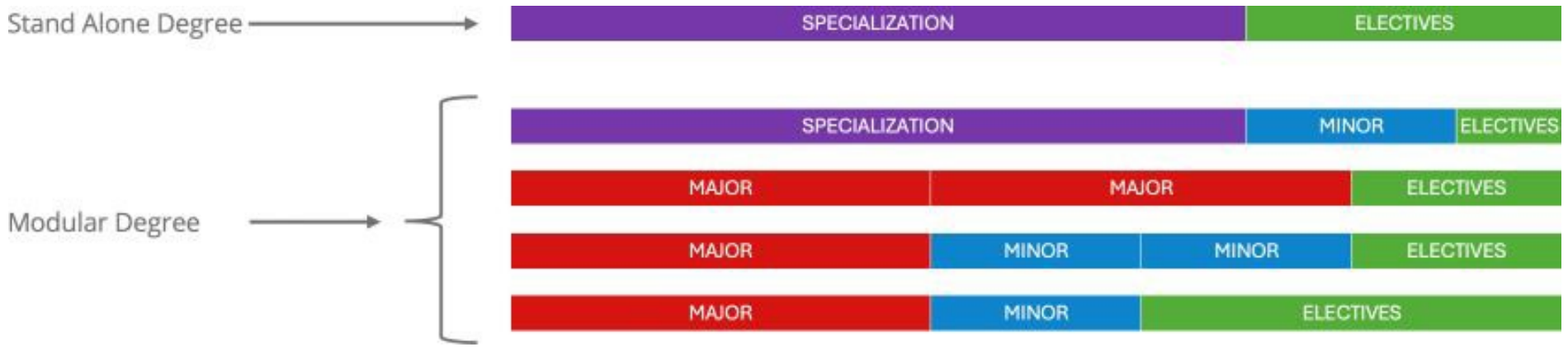
FALL 2025

Course Number	Title	Instructor (subject to change)
MATH 381	Mathematics with a Historical Perspective	Murty

WINTER 2026

Course Number	Title	Instructor (subject to change)
MATH 337	Introduction to Operations Research Models	TBA
MATH 339	Evolutionary Game Theory	Day
STAT 362	R for Data Science	Ling
MATH 385	Life Contingencies	TBA

What is the new Modular degree framework?



- The new Modular Degree Framework will require fewer credits for Major plans.
- “Double-counting” of up to 12.0 units.
- You will now be able to double major in MATH and STAT.

Mathematics and Statistics Plans within the New Modular Framework

PLANS WITHIN HONOURS DEGREES

Specializations

- Biology and Mathematics (BSCH): 84.0 units
- Computing, Mathematics, and Analytics (BCMPH): 90.0 units
- Mathematical Physics (BSCH): 105.0 units
- Mathematics (BSCH): 60.0 units
  - Sub-plans: Pure Mathematics / Applied Mathematics
- Statistics (BSCH): 60.0 units

Majors

- Mathematics: 48.0 units
- Statistics: 48.0 units

Minors

- Mathematics: 30.0 units
- Statistics: 30.0 units

Majors and SSPs: MATH/STAT courses in the first two years

MATH Major, MATH SSP, Mathematical Physics SSP

	FALL	WINTER
1st Year	MATH 110 (Linear Algebra)	
	MATH 120 (Differential and Integral Calculus)	
2nd year	MATH 280 (Advanced Calculus)	MATH 281 (Intro. Real Analysis)
	STAT 268 (Statistics and Probability I)	STAT 269 (Statistics and Probability II)
	MATH 225 (ODEs)	MATH 210 (Rings and Fields)

STAT Major, STAT SSP

	FALL	WINTER
1st Year	MATH 110 (Linear Algebra)	
	MATH 120 (Differential and Integral Calculus)	
2nd year	MATH 280 (Advanced Calculus)	MATH 281 (Intro. Real Analysis)
	STAT 268 (Statistics and Probability I)	STAT 269 (Statistics and Probability II)
		Options: STAT 362 (R for Data Science)

Majors and SSPs: MATH/STAT courses in the first two years

Computing, Mathematics and Analytics SSP

	FALL	WINTER
1st Year	MATH 110 (Linear Algebra) or MATH 112 (Intro. Linear Algebra) + STAT 161 (Intro. Data Science) or MATH 112 (Intro. Linear Algebra) + MATH 212 (Linear Algebra II)	
	MATH 120 or MATH 121 (Differential and Integral Calculus)	
2nd year	STAT 268 (Statistics and Probability I) or STAT 252 (Intro. Applied Probability)	STAT 269 (Statistics and Probability II)
	MATH 221 (Vector Calculus) or MATH 280 (Advanced Calculus)	Options: MATH 210 (Rings and Fields) MATH 300 (Model. Techniques Biol.) MATH 339 (Evol. Game Theory) MATH 225 (ODEs)* MATH 281 (Intro. Real Analysis)*

Majors and SSPs: MATH/STAT courses in the first two years

Biology and Mathematics SSP

	FALL	WINTER
1st Year	MATH 110 (Linear Algebra) or MATH 112 (Intro. to Linear Algebra) + STAT 161 (Intro. to Data Science) or MATH 112 (Intro. to Linear Algebra) + MATH 212 (Linear Algebra II)	
	MATH 120 or MATH 121 (Differential and Integral Calculus)	
2nd year	STAT 268 (Statistics and Probability I) or STAT 252 (Intro. Applied Probability)	STAT 269 (Statistics and Probability II) or BIOL 243 (Intro. Statistics)
	MATH 221 (Vector Calculus) or MATH 280 (Advanced Calculus)	MATH 225 (ODEs)

Minors: MATH/STAT courses in the first two years

MATH

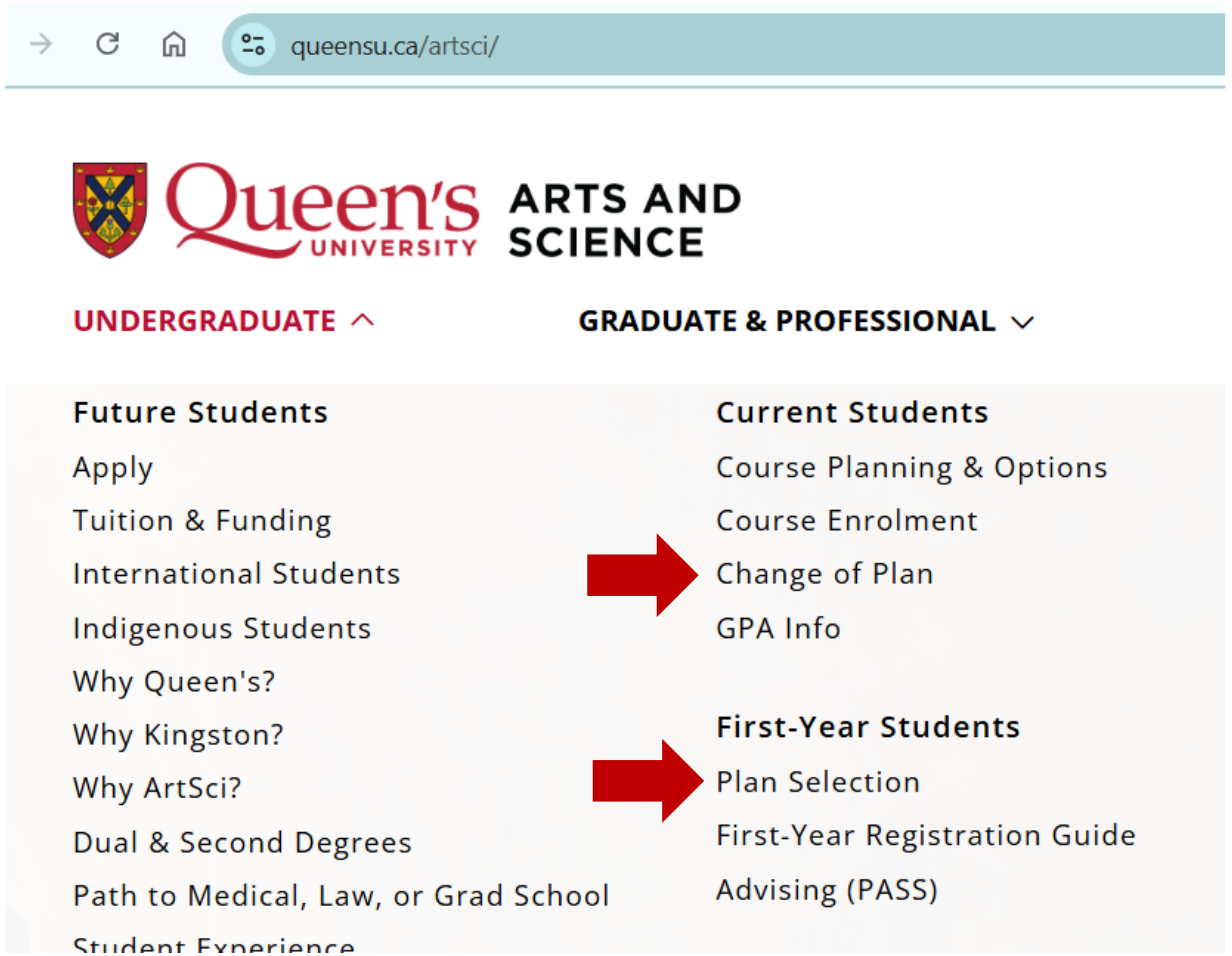
	FALL	WINTER
1st Year	MATH 110 (Linear Algebra) or MATH 112 (Intro. to Linear Algebra) + STAT 161 (Intro. to Data Science) or MATH 112 (Intro. to Linear Algebra) + MATH 212 (Linear Algebra II)	
	MATH 120 or MATH 121 or MATH 127+128 (Differential and Integral Calculus)	
2nd Year	STAT 268 (Statistics and Probability I) or STAT 252 (Probability) or STAT 263 (Intro. to Statistics)	Options: STAT 269 (Statistics and Probability II) MATH 225 (ODEs, also in the fall)

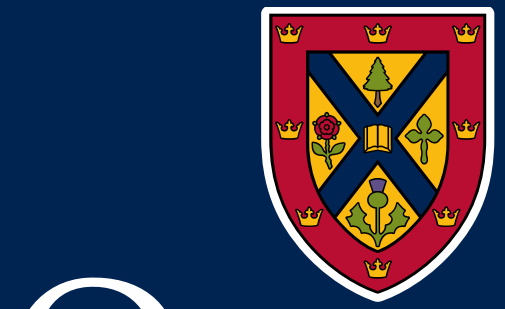
STAT

	FALL	WINTER
1st Year	MATH 110 (Linear Algebra) or MATH 112 (Intro. to Linear Algebra) + STAT 161 (Intro. to Data Science) or MATH 112 (Intro. to Linear Algebra) + MATH/STAT at 200-level or above	
	MATH 120 or MATH 121 or MATH 127+128 (Differential and Integral Calculus)	
2nd year	STAT 268 (Statistics and Probability I) or STAT 252 (Probability)	STAT 269 (Statistics and Probability II) or STAT 263 (Intro. to Statistics)
	MATH 280 (Advanced Calculus) or MATH 221 (Vector Calculus)	Options: MATH 225 (ODEs) STAT 362 (R for Data Science)

Where do we go for more guidance?

- **Review the information already on the Arts and Science website** (including detailed overviews of the course/unit requirements for all approved Modular Plans)
  - *Upper-year students* – Change of Plan webpage
  - *First-year students* – Plan Selection webpage
- **Watch for updates on Plan details/first-year placement thresholds as they get posted on those sites**
- **Reach out to our department (and others that you're interested in) for specific questions**
- **Connect with an Academic Advisor in the Student Services Office**





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