welcome to

Queen’s Computing
Our programs are customizable, professional, innovative, and multidisciplinary.

Our 9 program options give you the flexibility to take a unique path with computing courses that interest you.

Our courses prepare you for a variety of industries. There is high demand for students with computing degrees.

We use experiential learning techniques and continuously adapt our programs to prepare students for the future.

As part of the Faculty of Arts and Science, you can combine your computing courses with courses in multiple disciplines.
Learn core computing skills while focusing on various specialized areas such as:
Artificial Intelligence

- Design and program machines to act like humans
- Push the limits of machines in their ability to understand natural language, identify objects, create artistic designs, and extract relevant information to find solutions and support decision-making
Your specialized courses may include:

**COGS 100**
Introduction to Cognitive Science

**COGS 201**
Cognition and Computation

**CISC 352**
Artificial Intelligence

**CISC 452**
Neural and Genetic Computing
Biomedical Computation

- Combine problem-solving capabilities of computer science with advanced techniques in life science
- Explore the endless possibilities for improving health care
- Leads to future careers in medicine and medical research
Your specialized courses may include:

CISC 271
Linear Data Analytics

CISC 330
Computer-Integrated Surgery

CISC 471
Computational Biology

CISC 472
Medical Informatics
Computing & the Creative Arts

- Combine technical aspects of computing with creativity of the arts
- Learn the foundations of computing and art history, drama, music, or film
- Future careers involve the entertainment industry, art museums, multimedia design and production
Your specialized courses may include:

**COCA 201**
Introduction to Computing and the Creative Arts

**CISC 325**
Human-Computer Interaction

**CISC 352**
Artificial Intelligence
Computing, Mathematics, & Analytics

• Become prepared for advanced degrees or careers in a variety of areas
• Opportunity for graduate work in the theory of Computing or applied areas such as communications, optimization, security, or biomedical computing
Your specialized courses may include:

- **MATH 280**: Advanced Calculus
- **STAT 269**: Statistics and Probability II
- **MATH 310**: Group Theory
- **STAT 463**: Fundamentals of Statistical Inference
Data Analytics

• Build computational models critical to businesses, research & governments
• Explore applications that help understand customers, make effective investment decisions, recommend shows on platforms like Netflix, and detect cyber-intrusions or financial fraud
Your specialized courses may include:

CISC 271
Linear Data Analytics

CISC 371
Nonlinear Optimization

CISC 372
Advanced Data Analytics

CISC 451
Topics in Data Analytics
Fundamental Computation

- Explore the science and principles that underlie all of computing
- Broad training in the core subject areas
- Opportunity to choose courses from many different areas within computing
Your specialized courses may include:

- CISC 422
  Formal Methods in Software Engineering
- CISC 462
  Computability and Complexity
- CISC 466
  Algorithms II
Game Development

• Learn the fundamentals of game design and development
• Discover topics in AI, graphics, distributed systems, and HCI
• Contribute to everything from entertainment to social interaction, education, and artistic expression
Your specialized courses may include:

CISC 226
Game Design

CISC 326
Game Architecture

CISC 325
Human-Computer Interaction

CISC 486
Game Engine Development
Software Design

• Push the boundaries of computer systems beyond their current limits
• Explore the art and science of computer software architecture, analysis, and evolution
• Drive the software revolution in your future career
Your specialized courses may include:

- CISC 220  
  System-Level Programming

- CISC 340  
  Digital Systems

- CISC 327  
  Software Quality Assurance

- CISC 423  
  Software Requirements
You do not have to declare your specialization or major until the end of your first year.
All our first-year students can complete courses in

<table>
<thead>
<tr>
<th>General Computing Courses</th>
<th>Math Courses</th>
<th>Elective Courses</th>
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<tbody>
<tr>
<td><strong>ONE of the following</strong></td>
<td><strong>ONE of the following</strong></td>
<td>Any Arts and Science courses which includes:</td>
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<tr>
<td>CISC 101</td>
<td>MATH 112 &amp; CISC 102</td>
<td>Computing</td>
</tr>
<tr>
<td>CISC 110</td>
<td>MATH 111 &amp; CISC 102</td>
<td>Creative Arts</td>
</tr>
<tr>
<td>CISC 151</td>
<td>MATH 110</td>
<td>Humanities</td>
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<tr>
<td>CISC 181</td>
<td><strong>AND</strong></td>
<td>Languages</td>
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<td><strong>AND</strong></td>
<td><strong>ONE of the following</strong></td>
<td>Life &amp; Physical Sciences</td>
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<tr>
<td>CISC 121</td>
<td>MATH 120</td>
<td>Social Sciences</td>
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<td><strong>AND</strong></td>
<td>MATH 121</td>
<td></td>
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<tr>
<td>CISC 124</td>
<td>MATH 123 &amp; MATH 124</td>
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Specific programs have different requirements. Visit our website for more details.
Our program highlights

**gender diversity**

Our programs consist of over 30% women. We **support women in computing** through multiple events, workshops, mentorship programs and conferences.

**no experience required**

Our first-year courses **prepare all students** for upper-year courses. You do not need any prior programming experience to succeed in our courses.

**supportive community**

We have a team of faculty, staff, and student-led organizations who are **available to support you**. Our Undergraduate Admissions Assistant will be your mom away from home.
Ways to get involved

Computing Students’ Association

COMPSA is run by students who represent and bring together the entire Computing student community through events and opportunities.

Queen’s Women in Computing

The QWIC student team builds community and provides resources that empower students who are pursuing a future in the field of technology.

Computing Orientation

Computing Orientation is organized by the Tech Committee (TC) who dedicate their time to make Orientation Week possible.

Computing Student Research Conference

CSearch invites students from across Canada to get together to discuss research, share views, and present their research projects.
Explore the Possibilities for your Future Career
Where our Alumni Work
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