## Computing

Computer science is one of the top degrees in North America in terms of career opportunities. That's a good reason to study it – but it's not the only reason. It is also one of the most exciting and diverse subjects of study today, particularly at the Queen's School of Computing. Whether you're interested in software design, artificial intelligence, game development, or biomedical computation, we can offer you a vast range of courses to fit your interests – and that's only scratching the surface. Combine a Computing Major with a Minor in another discipline or take one of our more focused Specializations. The combinations are endless and will prepare you for today's fast-paced digital world, no matter what career you choose.

#### **C C Study** Computing

Computing is one of the top degrees for career opportunities in North America.

2 Learn from outstanding professors who are internationally recognized experts and committed educators.

3 Gain the skills and theoretical knowledge you'll need to excel as a computer scientist.

Take courses which reflect the sweeping uses of computing in all aspects of modern life.

Test the waters and explore your passions outside of computing while still immersed in our diverse multidisciplinary offerings.

#### Alumni Story

Susan Bartlett is a Queen's University alumna with a BSc in Software Design and a BA in English Literature. Through skills honed at Queen's, Susan leads teams of designers, researchers, and business strategists to deliver innovative solutions at Bridgeable. She is passionate about understanding the complex interactions people have with the world around them.

### **TOP ALUMNI JOBS**

ADOBE™ AMAZON™ APPLE™ CBC/RADIO-CANADA™ CISCO SYSTEMS™ **ELECTRONIC ARTS™ FACEBOOK™** GOOGLE™ IBM™ **MICROSOFT™** NASA™ ORACLE™ SICKKIDS HOSPITAL<sup>™</sup> **STATISTICS** CANADA™ **SYMANTEC™** TORONTO-**DOMINION BANK™** 









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.

cs.queensu.ca

#### add a CERTIFICATE

Data Analytics

Disability and Physical Activity

Employment Relations

Entrepreneurship, Innovation and Creativity

French for Professionals

Geographic Information Science

Global Action and Engagement

Indigenous Languages and Cultures

International Studies

Media Studies

Sexual and Gender Diversity

Urban Planning Studies

#### QUartsci.com/certs

# 2023-2024 Computing MAJOR MAP

BACHELOR OF COMPUTING (HONOURS): MAJOR, MINOR, SPECIALIZATION

	1ST YEAR	2ND YEAR	3RC
GET THE COURSES YOU NEED	First year is a good time to consider which area of computer science you would like to study, while learning the foundations of computer science and taking electives. We offer 8 main pathways to a Computing degree (or BA in the case of Computing and the Creative Arts). Attend Majors Night in the Winter term to learn more about which path is right for you. 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 computer science, while considering a minor and/or certificate such as <u>Entrepreneurship</u> , <u>Innovation</u> and <u>Creativity</u> . Learn more about <u>Certificates</u> and <u>Internship</u> 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. Develop your entrepreneurial skills by participating in the <u>Dean's Changemaker</u> <u>Challenge</u> (ASCX 200/300).	A chan interes deepei science make s your d course
GET RELEVANT EXPERIENCE	Join teams or clubs on campus such as the Queen's Autonomous Sailboat Team (QAST). Participate in Open Source Development projects. Join the Queen's ACM Programming team. See the <u>AMS Clubs Directory</u> or the <u>Queen's Get Involved</u> page for more ideas.	Talk to the School and their faculty about research opportunities through <u>Undergraduate</u> <u>Summer Research Assistantships (NSERC/USRAs)</u> . Look into summer jobs by talking to the dept. or Career Services about work through <u>SWEP</u> or <u>Work-Study</u> . Join the <u>COMPSA Site Services team</u> to develop websites. Be a <u>COMPSA tutor</u> .	Stay du faculty 16 moi <u>Progra</u> <u>School</u>
GET CONNECTED WITH THE COMMUNITY	Volunteer on- or off-campus with different community organizations such as <u>Queen's</u> <u>Women in Computing (QWiC)</u> . Offer your services to a non-profit organization. Organize after school programming or robotics clubs in the local elementary or secondary schools.	Get involved with the <u>Computing Students</u> <u>Association</u> (COMPSA). Consider volunteering with initiatives such as high school programming competitions, <u>Hour of Code</u> , or local FIRST Robotic teams. Consider entrepreneurial opportunities via programs like the <u>Queen's</u> <u>Innovation Connector Summer Initiative (QICSI)</u> .	Conner worksh and QV the Lin confere Womer
GET THINKING GLOBALLY	Prepare for work or studies in a multi-cultural environment by taking QUIC's <u>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 <u>the International Programs Office</u> .	Build y involve improv
GET READY FOR LIFE AFTER GRADUATION	Grappling with program decisions? Go to <u>Majors</u> Night or get some help wondering about career options from Career Services. Build your transferable skills in time management, organization, writing, and more with <u>Student Academic Success Services</u> .	Explore careers of interest in the Career Services Information Area. For more information check out <u>Career Cruising</u> or by finding and connecting with alumni on <u>LinkedIn</u> .	Start fo educat interes requira get <u>hel</u> Career

#### 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.



#### **RD YEAR**

chance to start grouping courses in areas of cerest. This is where you will begin to dive eper into your chosen area of computer ience. Meet with an <u>Academic Advisor</u> to ake sure you are on track to complete ur degree plan and have planned out your urses for next year.

ay during the summer as an assistant to a culty member. Consider applying to the 12month <u>Queen's Undergraduate Internship</u> ogram through Career Services. Consult the hool's FAQ and consider applying.

nnect with professors at events or orkshops hosted by the School, COMPSA d QWiC. Connect with alumni by joining e LinkedIn group <u>Queen's Connects</u>. Attend nferences like the <u>Canadian Celebration of</u> omen in Computing (CAN-CWIC).

ild your intercultural competence by getting olved with other cultures or by practicing or proving your language skills.

art focusing on areas of interest. Research lucation requirements for careers of :erest. If needed, prepare to take any quired tests (like the MCAT or GMAT) and t help thinking about Grad School from reer Services.

#### 4TH OR FINAL YEAR

In fourth year you will have the chance to participate in research-based courses that can lead to <u>Graduate</u> <u>School</u> 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).

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Interested in working on a real-world problem with an actual client? Take <u>ASCX 400</u> and develop your consulting and project-management skills.

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 <u>workshop</u> for help.

Consider joining professional associations like <u>Canadian Information</u> <u>Processing Society, IEEE Computer</u> <u>Society</u>, and the <u>Association for</u> <u>Computing Machinery (ACM)</u>.

Join groups on LinkedIn reflecting specific careers or topics of interest in Computing.

International students interested in staying in Canada can speak with an International Student Advisor.

Apply to jobs or future education, or make plans for other adventures. Get help from Career Services with job searching, resumes, interviews, <u>Grad</u> <u>School applications</u>, or other decisions.

Apply for the <u>Queen's Career</u> Apprenticeship: Kingston (QCA:K).

#### What will I learn?

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A degree in Computing can equip you with:

• Ability to design, develop and maintain software systems

 Oral and written communication to summarize complex ideas and present data in visual formats

- Ability to model and solve a
- diverse range of problems
- Critical thinking and systematic problem-solving approaches

• Proficiency in mathematics and logical computational thinking

- Resource and time management
- Project management

#### Where can I go?

A degree in Computing 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:

- 3D animation
- Artificial intelligence
- Biotech
  - Computer programming
  - Computing and the creative arts
  - Cognitive science
  - Cryptography and cybersecurity
  - Data analytics
  - Database administration
  - Game development/design
  - Software architecture
  - Software development
  - Software testing
  - Systems administration
  - Web development

#### and much more!

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

## Computing



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

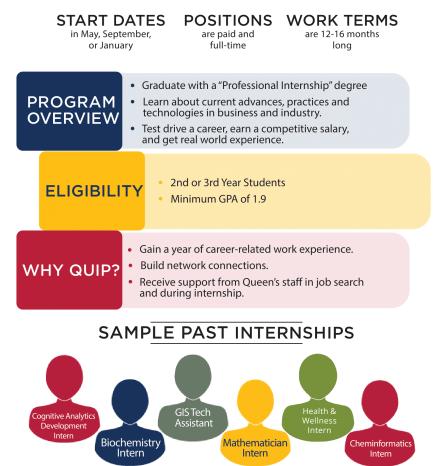
Queen's provides you with a broad range of support services from your first point of contact with the university through to graduation. At Queen's, you are never alone. We have many offices dedicated to helping you learn, think and do.

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 <u>Student Affairs</u> website for available resources.



School of Computing Goodwin Hall 25 Union Street 613-533-6050 cs.queensu.ca

## **QUIP**QUEEN'S UNDERGRADUATE



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

## Why study in Kingston?

For 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 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

Jere closer than you t 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 CANADA Queen's the experience of a Beijing / 15 hrs lifetime at Queen's - and graduate Calgary / 4 hrs Vancouver / 5 hrs with a degree that is globally San Francisco / 5.5 hrs Toronto recognized Denver/3 hrs among UNITED the best. STATES



Kingston

New York / 1.5 hrs

Bermuda / 2 hrs

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London / 7 hrs

Halifax / 2 hrs

Dubai / 14 hrs