BACHELOR OF COMPUTING

UNIVERSITY of GUELPH

IMPROVE LIFE.

BACHELOR OF COMPUTING

Computer Science Major

Help explore problems, build innovative computing solutions and contribute to the evolution of technology. This major will provide you with a theoretical foundation in computer science, as well as practical experience in software development and an introduction to hardware. You will explore pressing computer science issues, from large system software development to emerging technologies. This major will focus on programming and the theory of computation, with plenty of flexibility in selecting computer science electives to fit your interests, such as Computational Intelligence, Computer Security, Game Programming and Human Computer Interaction.

YOUR FIRST YEAR IN THE COMPUTER SCIENCE MAJOR

Semester 1	▪ CIS*1300 Programming ▪ CIS*1910 Discrete Structures in Computing I ▪ MATH*1200 Calculus I ▪ 2 electives which may include courses in your Area of Application
Semester 2	▪ CIS*2500 Intermediate Programming ▪ CIS*2910 Discrete Structures in Computing II ▪ MATH*1160 Linear Algebra I ▪ 2 electives which may include courses in your Area of Application

Software Engineering Major

Contribute to innovative and cutting-edge software design. Providing a foundation in computer science concepts, this program focuses on team-based software development and professional standards. This major provides an excellent background in design and development, as well as the implementation and the evolution of software. Students' soft skills such as communication and teamwork will be enhanced and strengthened. You will have a unique opportunity to take courses on different aspects of software engineering, including design methods, team interactions, communications and managing real-world software engineering projects.

YOUR FIRST YEAR IN THE SOFTWARE ENGINEERING MAJOR

Semester 1	▪ CIS*1250 Software Design I ▪ CIS*1300 Programming ▪ CIS*1910 Discrete Structures in Computing I ▪ 2 electives which may include courses in your Area of Application
Semester 2	▪ CIS*2250 Software Design II ▪ CIS*2500 Intermediate Programming ▪ MATH*1160 Linear Algebra I ▪ 2 electives which may include courses in your Area of Application

Curious about courses in your second, third or fourth year? Check out the Academic Calendar. Go to _admission.uoguelph.ca/degrees_ and follow the link.

ONTARIO ADMISSION REQUIREMENTS

Required Courses	▪ English ▪ Calculus and Vectors ▪ 4 additional courses
Ontario High School Requirements	▪ ENG4U ▪ MCV4U ▪ 4 additional 4U or 4M courses
Note	▪ Computing and Data Management courses are recommended

Make Your Degree Your Own

Computing intersects with many different fields and industries. You will have the opportunity to broaden your skills and knowledge by studying a secondary area that is of interest to you.

This Area of Application is a set of 8 courses from another discipline. There are over 40 different disciplines to choose from, some of which are:

Physics • Mathematics • History • Economics Music • Geographical Information Systems
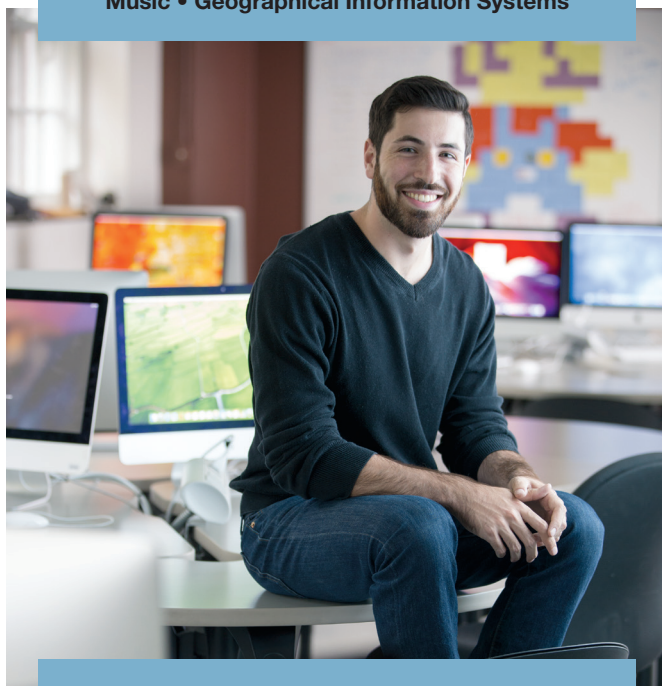
AREA OF APPLICATION EXAMPLES

Computing + Psychology

▪ Apply principles of human psychology to computing by studying usability of systems, investigating the effects of computers on people and developing more user-friendly interfaces that meet the needs of users.

Computing + Business Administration

▪ Develop business applications, analyze business systems and implement economic models with a firm background in both computing and business.

Computing + Physics

▪ Utilize knowledge of various topics in computing to aid contemporary physics research, such as astrophysical modeling, particle physics research or quantum computing.

Computing + Biology

▪ Explore the growing field of bioinformatics and engage in fine-tuned software development for a wide array of complex biological problems.

CO-OP OPPORTUNITIES

Gaining Work Experience

While receiving hands-on experience in your courses, you may want to apply your skills and gain work experience before you graduate. We offer co-op with both of our majors. All co-op work terms are full-time, paid positions relevant to your field where you can experience different work environments and develop networks.

Co-op terms are organized into four and eight-month blocks. During the eight-month co-op terms, you can choose to have two jobs at different companies for four months each, or one eight month job at one company.

uoguelph.ca/experientiallearning

PREVIOUS POSITIONS

Software Development Engineer — **Amazon**
Software Test Specialist — **Magnet Forensics**
Web Developer — **Sandbox Solutions**
Software Engineering Intern — **Square**
Software Developer — **IBM**
Unity Game Developer – **Adknown**
Software Development Engineer — **Microsoft**
Crypto Material Systems Analyst — **Government of Canada**

CO-OP SCHEDULE

	Fall	Winter	Summer
Year 1	Regular Study	Regular Study	—
Year 2	Regular Study	Regular Study	Co-op
Year 3	Co-op	Regular Study	Co-op
Year 4	Regular Study	Co-op	Co-op
Year 5	Regular Study	Regular Study	—

When choosing co-op, you will be adding 12 months to your degree

## The John F. Wood Centre for Business and Student Enterprise

The John F. Wood Centre for Business and Student Enterprise, housed within the School of Business and Economics, connects young leaders with opportunities for growth. We offer course credits, startup incubation, entrepreneurship support and experiential learning opportunities.

Please visit: *uoguelph.ca/johnfwoodcentre*

The Hub Incubator Program

Whether for-profit or not-for-profit, you can receive the support to grow or begin your startup. The Hub offers dedicated space to grow your business. We focus on helping startups develop a strong business model that can be rigorously tested and intelligently scaled. Take your startup to the next level by applying to The Hub.

The Hub galvanizes ideas and helps develop them into high potential opportunities. The program is available to University of Guelph students and alumni working on innovative projects. The Hub offers funding, access to experienced entrepreneurs, office space, business services, resources and entrepreneurial workshops to help expedite growth and build your network.
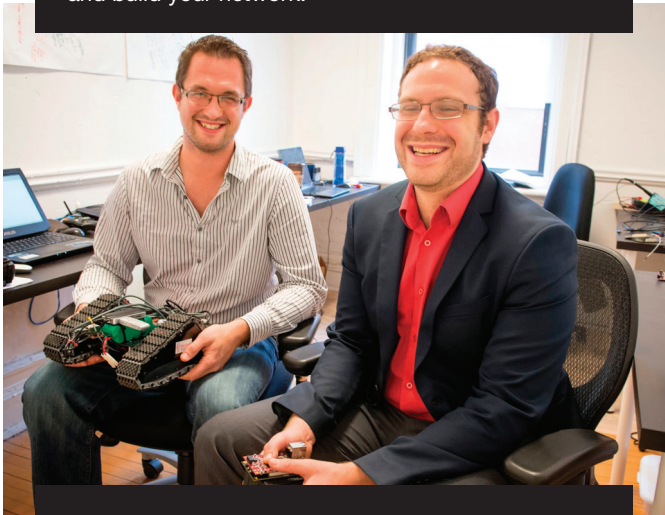
"The Hub was an excellent experience for Redtree Robotics. Once we entered the Hub, the backing of the program caused more people to pay attention to us. They kept us motivated and on track by helping to set our goals and shifting our thinking during each meeting. The $8,000 was helpful since it helped us build the initial prototype and ultimately, connected us to Founderfuel. This led to follow-on investment of over $300,000 which has led us to three more prototypes and commercialization."

Jason Ernst, Ph.D. Graduate Computer Science, Redtree Robotics Co-founder

OUR SCHOLARSHIPS

Scholarships for Canada's Best and Brightest Future Leaders!

In 2019/2020, we awarded $24.2 million to 7,730 undergraduate students, including $11.4 million in need-based awards to 4,635 students!

TOP SCHOLARSHIPS
12 scholarships worth $42,000 each over four years.

President's Scholarships
We have eight President's Scholarships that recognize students entering with a minimum 90% admission average who have made significant leadership contributions to their schools and communities.

Lincoln Alexander Chancellor's Scholarships
Two of these scholarships are given each year to recognize students entering with a minimum 90% admission average who have made significant leadership contributions to their school and communities. In addition, students must be Aboriginal; or a person with a disability; or a member of a racial minority.

Board of Governors' Scholarships
- 25 awards of $20,000 payable over four years
- Recognizing students with outstanding academic excellence
- Application not required

> Find the scholarship that's right for you!
> *uoguelph.ca/studentfin*

University of Guelph Entrance Scholarships
- Students with an admission average of 85.0%-89.9% are guaranteed $2,000
- Students with an admission average of more than 90% are guaranteed $3,000
- Application not required, you will be considered automatically based on your admission average

Accessibility Bursaries
- 200 awards of $14,000 payable over four years of study are given to students with demonstrated financial need
- $5,000 in year one and $3,000 per year in years two, three and four

Registrar's Entrance Bursaries
- 500 awards of $4,000 for the first year of study
- For students with demonstrated financial need

Ada Lovelace Scholarship in Computer Science
- 1 award of $1000 for the first year of study
- For students with demonstrated financial need and a minimum 80% admission average

Mieso Denko Memorial Scholarship
- 1 award of $1000 for the first year of study
- Student entering the Bachelor of Computing program with the highest admission average

If you are eligible for scholarships and/or entrance awards you will know the total amount of your award(s) before the deadline to accept your offer of admission – another way we make it easy to choose U of G!

@UofGComputing: Just an hour left in hacking time for the 36-hr #GuelphHacks for Mental Health!

Upcoming Events

Due to the ongoing COVID-19 pandemic please visit the following sites for information and updates regarding upcoming events!

admission.uoguelph.ca/events
uoguelph.ca/ceps/events

Contact Us

Recruitment & Outreach Staff
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uoguelph.ca/computing

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COME FOR A VISIT
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