Life at an intersection.

Waterloo is a place of opportunity. A place to dream up new ideas and bring them to life. It’s a place to explore, experiment, and experience new things as you decide what you want to do, where you want to go, and how you want to impact the world.

At Waterloo, you’re not bound by traditional conventions or expectations. Around here, innovation reigns. We’ll encourage you to take risks and challenge the status quo, to launch startups and shatter glass ceilings. Whether you volunteer over Reading Week, write a best-selling book, or test drive a new career in co-op, we want you to go Beyond Ideas.

Where will you go from here?
Discover limitless potential.

For more than 60 years, we’ve been challenging conventions and turning heads. We took innovation beyond a buzzword and made it our identity.

We set the bar for co-op in Canada because we saw a need for experienced, university-educated graduates. We encourage dreamers and entrepreneurs because we believe that cultivating creativity is key to global progress. We value diversity and inclusivity because we know we’re better, brighter, and stronger together. Some people call that innovative, but that’s just who we are.

Be yourself, work hard, and reap the rewards. We’ll do the same.

uwaterloo.ca/future/rankings
for 27 consecutive years
(Maclean’s University Ranking)

#1 comprehensive research university in Canada (Research Infosource, 2018)

#1 in Canada for preparing career-ready graduates (Maclean’s, 2018)

#2 in Canada for graduate employability (QS Graduate Employability Rankings, 2019)

#2 among comprehensive universities for hands-on experiential learning (Maclean’s Ranking of Comprehensive Universities, 2019)

#1 in Canada for producing venture capitalist-backed entrepreneurs (PitchBook Universities Report, 2018–2019)

#1 for 27 consecutive years (Maclean’s University Ranking)

#2 in Canada for partnerships with employers (QS Graduate Employability Rankings, 2019)

34,002 undergraduate students: 47% women, 20% international students (Fall 2018)

120 Campus Wellness staff to support you

1 of 10 global universities leading the UN Women’s HeForShe IMPACT 10x10x10 initiative to equip women for success and leadership in traditionally male-dominated fields

32 varsity sports teams to cheer on

TOP 50 among the most international universities in the world (Times Higher Education, 2019)

211 clubs to join

93.9% student retention rate (Waterloo Performance Indicators)

“CREATOR-OWNS” intellectual property policy means your great ideas belong to you

Nobel Prize in Physics for 2018, awarded to Professor Donna Strickland

TOP 5 destination for Schulich Leader Scholarship applicants
CITY OF DREAMERS

Prepare to be charmed.

The City of Waterloo gives you the best of two worlds. You have all the perks of a big city – transportation, culture, and nightlife – with the charm and familiarity of a small town. Plus, you and your friends are only a short bus ride from Toronto, Canada’s entertainment hub and home to some of our largest co-op employers.

STARTUP PARADISE

Waterloo is an entrepreneur’s playground. Everything you need to kick-start a new business is within a few minutes of campus. Even if you don’t see yourself as the next startup sensation, living in one of the world’s top startup hubs gives you the scoop on new trends and technologies and puts you at the centre of a vibrant job market.

A LITTLE BIT OF EVERYTHING

The Region of Waterloo is made up of three cities, each with its own flavour and attractions. Use your student card to ride Grand River Transit and enjoy easy access to all the Region has to offer, from 1200+ festivals and events to the ever-growing restaurant and food truck scene. For a sneak peek of Waterloo life, check out #KWAwesome.

WHY STUDY IN CANADA

Canada offers a safe, welcoming environment to pursue your studies and explore your dreams. Our country is home to one of the world’s best educational systems and we’re internationally celebrated for our commitment to peace, multiculturalism, and inclusivity. You can work on or off campus while you study, and you can apply for a Post-Graduation Work Permit to gain more Canadian work experience once you graduate.
Uptown Waterloo, home to dozens of restaurants, shops, cafés, music venues, clubs, and more, is a 20-minute walk (or a quick bus ride!) from campus.

601,220 people call the Region of Waterloo home

TOP 15 startup ecosystems in the world (Startup Genome, 2019)

115 KM to Toronto. Home of the CN Tower, Toronto Raptors, and Drake. You know the one.
CO-OP

Experience is everything.

Forget everything you thought you knew about student internships. Our co-op program adds up to two years of paid work experience to your résumé. With access to North America’s largest selection of co-op jobs, you’ll be able to test drive exciting careers and build a world-class professional network.

UNLIMITED CHOICES

We’ve all heard that variety is the spice of life. And for Kylie, co-op delivered just that. She’s provided personalized care to individuals living with disabilities, planned social events for students, and managed the office for a startup.

Along the way, she’s discovered what she does and doesn’t like doing, the importance of professional communication and flexibility, and the impact of a great mentor. Now, Kylie’s a “Swiss Army knife” with a can-do attitude who can’t wait for what’s next.

KYLIE
HONOURS ARTS AND BUSINESS, CO-OP
FACULTY OF ARTS

7,000+ co-op employers in more than 60 countries
HOW CO-OP WORKS
In co-op programs, you’ll alternate school and work terms, typically spending four months as a full-time student followed by four months as a full-time, paid employee building relevant skills within a work environment. Before each work term, you’ll go through an application process: you’ll update your résumé, practice your interview responses, and meet with prospective employers. Students have a 98.5 per cent co-op employment rate, thanks to our professional development training, career resources, student advisors, and students’ own initiative!

Once on the job, you’ll learn to adapt to your new surroundings and co-workers and develop a fresh appreciation for your classroom studies. As you progress through your work terms, your résumé – and confidence – will grow, preparing you to launch your career.

EXPERIENCE FOR EVERYONE
If you’re leaning toward a program without co-op or looking for even more ways to get hands-on experience, take advantage of programs that will help you build a standout résumé.

EDUCATION CERTIFICATE
Develop professional skills, explore career options, and learn how to market yourself in this program offered exclusively to students not in co-op programs.

GLOBAL EXPERIENCE CERTIFICATE
Expand your world view and knowledge of global issues by earning a Global Experience Certificate.

EXCHANGE AND STUDY ABROAD
Satisfy your wanderlust and your course requirements through 100+ exchange and study-abroad opportunities.

PROFESSIONAL DEVELOPMENT PROGRAM
Learn the skills that will help you land jobs – and quickly climb the corporate ladder – in our free professional development courses.

STUDENT LEADERSHIP PROGRAM
Explore and enhance your leadership abilities and earn an e-certificate in this series of 12 workshops.

$42,000–$90,000+
potential total co-op earnings over five terms

#1
in Canada for preparing career-ready graduates
(Maclean’s, 2018)
Write your own ticket.

No school can guarantee your success after graduation. But we come really close. While other university alumni try to break into the work world, you’ll be focused on your next opportunity.

RUPI KAUR, BA ‘15
Honours Arts and Business
Author and Illustrator

DIANA CHIU, BSc ‘05, MBET ‘06
Science and Business
Senior manager, business development
DuckDuckGo

JONATHAN LAURENCIC, BA ‘10
Recreation and Business
Co-founder and director of operations
Elora Brewing Company

#1 in Canada for producing venture capitalist-backed entrepreneurs

TOP 25 in the world for graduate employability
(QS Graduate Employability Rankings, 2019)

GRADUATE STUDIES
We surveyed your peers and found that almost half of incoming Waterloo students intend to pursue education beyond undergraduate studies. If that’s your plan, consider continuing your studies in familiar territory by applying to one of our 180+ research and professional graduate programs.

uwaterloo.ca/future/success
WHERE ARE THEY NOW?
More than 205,000 graduates have used their Waterloo education as a stepping stone to success. From startup founders to city planners, our alumni are workplace warriors. Two years after graduating, 96 per cent of our graduates are employed. And perks like complimentary career advising sessions and exclusive access to our alumni job board help with the next opportunity, too.

#UWFUTURESHAPERS

<table>
<thead>
<tr>
<th>Retail and Manufacturing</th>
<th>Education</th>
<th>Finance and Insurance</th>
<th>Government and Public Administration</th>
<th>Communications and New Media</th>
<th>Professional Services</th>
<th>Hospitality and Recreation</th>
<th>Health Care and Social Services</th>
<th>Utilities and Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process engineer, Toyota Motor Manufacturing Canada Inc.</td>
<td>Teacher recruitment manager, Teach For Canada</td>
<td>Treasury and balance sheet analyst, TD Bank Group</td>
<td>Program advisor; Ontario Ministry of Environment, Conservation and Parks</td>
<td>Data scientist, Facebook</td>
<td>Senior consultant, Deloitte Consulting</td>
<td>Offensive linesman, Hamilton Tiger-Cats Football Club</td>
<td>Child protection worker, Children’s Aid Society</td>
<td>Geotechnical design, Shell Canada Ltd.</td>
</tr>
<tr>
<td>Financial analyst, The Beer Store</td>
<td>Math teacher, Columbia International College</td>
<td>User experience specialist, Manulife Financial</td>
<td>Forensic search technologist, Royal Canadian Mounted Police</td>
<td>Software engineer, Twitter</td>
<td>Planner, Groundswell Urban Planners Inc.</td>
<td>Stage manager, Stratford Festival</td>
<td>Resident physician MD, University of Toronto</td>
<td>Transit planner, City of Burlington</td>
</tr>
</tbody>
</table>

96% of our employed co-op grads find jobs related to the skills they gained at Waterloo within six months of graduation.
RESIDENCE LIFE

100% residence guarantee for all new students

UNLIMITED DOWNLOADS over residence Internet (legal downloads, of course)

24/7 controlled access to all residence buildings and rooms to keep you safe
Your new social network.

Living in residence puts you in the middle of the action. Get the full university experience while making friends and memories that will last long after graduation.

**CHOOSING A RESIDENCE**

Your home away from home should suit your budget and personality. Choose from Waterloo Residences’ traditional single or double rooms or suite-style apartments, or opt to live at one of our on-campus University Colleges: Conrad Grebel University College, Renison University College, St. Jerome’s University, and St. Paul’s University College. All nine first-year residences offer personal and academic support to help you adjust to living away from home, including Living-Learning Communities, residence dons, and tutors.

**DIVERSE FOOD OPTIONS**

Enjoy fresh meals and snacks from 38 on-campus food outlets. Meals include halal, kosher, vegan, and vegetarian options, plus custom creations for anyone with food allergies or other dietary restrictions. There’s a cafeteria that opens two hours before sunrise during Ramadan, a spice bar to add a taste of home, and residences where you can cook your own meals. In our city, you’ll find it easy to buy food from home and if you want someone else to cook, local restaurants cater to tastes from around the world.

**LIVING-LEARNING COMMUNITIES**

Living-Learning Communities (LLCs) group students with common interests together within our larger residence communities. Live with peers from your program, students who share your passion for social justice, or other student athletes. You can apply to join an LLC when you apply to live in residence.

Your residence room is a blank canvas waiting for you to achieve your #roomgoals. It’s got a bed, a desk, a closet, and much more, but it’s the personality you bring to the space that makes it feel like home. Pack your movie posters, your favourite pillow, your pet photos – we can’t wait to welcome you home.

**WHO’S DON?**

Residence life dons are upper-year students who live and work in the residences to facilitate an inclusive and supportive environment. They organize events, monitor the buildings, and offer support around the clock. Think of it like having fun, caring older siblings in residence with you.

95% of students who chose residence in first year returned for their second year of studies

[link](uwaterloo.ca/future/residence)
IN HER ELEMENT

Volunteering for the Substance Use Team sparked Prabhjeet’s passion for raising the awareness of drug use among teens. Through on-campus activities she generates discussion about knowing yourself, asking for help, and accessing the supports you need. “I’m so thankful that Waterloo helped me find this new interest and is creating a safe space to talk about mental health.”

Prabhjeet’s self-care includes dance, running, music, and friends (...and snuggling with therapy dogs each time they’re on campus).
We’re all in this together.

University can be rewarding and challenging. Our campus support services give you the resources and personal care you need to get the most out of your university experience.

**STRENGTH IN DIVERSITY**
Whatever your ethnicity, religion, gender, or sexual identity, you’re welcome here.

**INTERNATIONAL AND CANADIAN STUDENT NETWORK**
With the goal of making all students feel at home, this network connects local, international, and exchange students through weekly events.

**THE GLOW CENTRE FOR SEXUAL AND GENDER DIVERSITY**
The Glow Centre promotes a healthy attitude toward all sexual orientations and gender identities by offering confidential peer support, discussion groups, social events, and resources.

**WATERLOO INDIGENOUS STUDENT CENTRE**
This centre celebrates the values and rights of Indigenous peoples and cultures. It facilitates the sharing of Indigenous knowledge with relevant information and support.

**WATERLOO CHAPLAINS**
Waterloo has chaplains representing 11 different faith traditions. They can provide you with support and help as you explore spiritual questions.

**CAMPUS WELLNESS**
We offer extensive services to help keep your body and mind healthy, and you at the top of your game.

**HEALTH SERVICES**
The on-campus Student Medical Clinic offers a range of services, from providing prescriptions and immunizations to addressing your mental and sexual health concerns. Meet with doctors, nurses, mental health specialists, and registered dietitians.

**COUNSELLING SERVICES**
Counselling Services is dedicated to supporting your personal, social, and academic experience at Waterloo. It offers one-on-one counselling, group therapy, plus coping skills seminars and workshops to support your mental health.

**UW MATES**
MATES (Mentor Assistance Through Education and Support) is a one-to-one student peer support program providing academic, personal, and mental health supports through workshops, appointments, and drop-in sessions across campus.

**STUDENT SUPPORT**
Take advantage of services to help you adjust to the expectations of university.

**STUDENT SUCCESS OFFICE**
From Orientation right through to convocation, the SSO supports you with academics and personal development. Services include academic skills and leadership workshops, peer success coaching, cultural integration, and study-abroad and exchange programs.

**ACCESSABILITY SERVICES**
It ensures everyone has equal access to education. They’ll design and facilitate academic accommodation plans for you if you have permanent or temporary disabilities.

*Service provided by Waterloo undergraduate student association.*

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**Uwaterloo.ca/future/support**

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**GLOW**
one of Canada’s oldest university-based LGBTQ groups

**Here 24/7**
offers addictions, mental health, and crisis services in person and over the phone

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120 Campus Wellness staff to support you
We know how to have fun.

Our campus is packed with opportunities to get involved no matter how unique your interests. Between our clubs, associations, recreation programs, and events, there’s something for everyone. For a behind-the-scenes look at student life, check out our Instagram stories every Thursday (@uofwaterloo).

YOUR STUDENT ASSOCIATION
The Waterloo undergraduate student association is your student voice on campus and the centre of student life. As an undergrad, you’re automatically a member, which means access to over 200 clubs, 12 student-run services, student government, and hundreds of job and volunteer opportunities.

CLUBS AND SOCIETIES
There’s no excuse for boredom on campus. We have more than 200 clubs, societies, and associations for you to explore. If you don’t see one that fits your exact interest, start your own club! There’s always room to expand the roster.

SPORTS AND RECREATION
Our fitness facilities, athletics clubs, intramural sports, varsity teams, and drop-in classes are available throughout the year to help you stay fit and get plugged in to campus life.

STUDENT EVENTS
Clear your calendar and check out the events happening around campus. To get you started, there’s Orientation, Welcome Week, and Black and Gold Day. Add in trivia nights, community festivals, and faculty events, and your social calendar will fill up quickly.

FREE entry to Waterloo Warriors home games with your Waterloo ID

211 academic, charitable, social, religious, political, sports, and cultural student-run clubs to join

200+ students employed by your student association in part-time and co-op positions

uwaterloo.ca/future/life
From a small town in Ecuador to Canada’s innovation hub, Iliana was drawn to Waterloo by the Global Business and Digital Arts program. Although initially hesitant to start her academic career in the Bridge to Academic Success in English (BASE) program, Iliana is thankful for the experience.

“My BASE peer leaders helped me improve my speaking and listening skills. The program gave me the confidence to interact with English speakers while letting me work toward my degree.”

#BEYONDIDEAS
#STUDYINENGLISH
#PEERMENTORSHIP

GLOBAL BUSINESS AND DIGITAL ARTS
COMPLETED BRIDGE TO ACADEMIC SUCCESS IN ENGLISH
Here for you from day one.

Studying in a different country takes a lot of hard work and ambition. From International Orientation to English language support and cultural student groups, we’ll help you make a smooth transition to life in Waterloo.

**ENGLISH LANGUAGE PROGRAMS**

If you meet our academic admission requirements but your English language scores are just below the required scores, you may receive a conditional offer of admission through one of our English language pathway programs.

› Bridge to Academic Success in English
› English Language for Academic Studies

You don’t apply directly to these programs, but if you’re admitted to one, you’ll take intensive language courses while earning credit toward your Waterloo degree. See page 46 for our English language requirements.

**PRACTISE YOUR ENGLISH**

Join groups run by fellow students and language professionals where you can make friends, practise your English, and learn about Canadian culture.

› English Conversation Cafés
› Conversation Partner Program
› International Canadian Student Network

**FRIENDS FROM HOME**

It’s great to make new friends, but sometimes it’s nice to connect with students from home. Among our 200+ clubs are cultural clubs such as

› Association of Caribbean Students
› Culture and Language Exchange Club
› Indian Cultural Association
› Latin American Student Association
› Muslim Students’ Association
› UW Daebak

**PEER SUPPORT**

Ease your transition to Waterloo with the support of your peers. The International Peer Community helps new international students build friendships and learn about Canadian culture through activities on and off campus.

116 countries are represented by the undergrad students on our campus

1 in 5 undergraduates are international visa students

Regulated Canadian Immigration Consultants on campus to offer you immigration advice

uwaterloo.ca/future/transition
More than business.

Connect with others who are fascinated by the way business and money shape our world, and who want to test their problem-solving, business savvy, and technical skills as they build a better tomorrow.

ENDLESS OPPORTUNITIES

Our programs were created in collaboration with employers to give you an edge in the marketplace. We prepare you for the world of business and give you the freedom to explore other passions that will help you define your industry niche and expand your portfolio. You’ll find yourself among self-starters, working in paid co-op positions with top business leaders, and learning from a community of mentors.

Nearly 25% of Waterloo students are enrolled in business-related majors, minors, and program options.

(Business Working Group, 2017)
EYE ON THE BALL

Some students value sleep and studying above all. Varun thrives on chaos. An accounting and finance major, he found the right balance, even playing for the varsity baseball team. “School is about more than studying. It’s balancing your physical and mental well-being, building friendships, and pushing yourself.”

His hard work and dedication have already paid off in the form of a job offer from EY in Toronto. “Getting a job like this is the entire reason I’ve worked so hard these past few years.”

HOME OF VELOCITY

Canada’s most productive startup incubator in Canada for Business and Management Studies, and Accounting and Finance (QS World Rankings, 2019)

ENTREPRENEURIAL CULTURE

Waterloo can help you bring innovative, world-changing ideas to the global marketplace. Programs such as Velocity, St. Paul’s GreenHouse, and the Conrad School of Entrepreneurship and Business offer mentorship, creative space, and financial resources to get you started.

BUSINESS PROGRAMS

Accounting and Financial Management
Biotechnology/Chartered Professional Accountancy
Biotechnology/Economics
Business Administration (Laurier) and Computer Science (Waterloo) Double Degree
Business Administration (Laurier) and Mathematics (Waterloo) Double Degree
Computing and Financial Management
Environment and Business
Global Business and Digital Arts
Honours Arts and Business
Information Technology Management
Management Engineering
Mathematical Finance
Mathematics/Business Administration
Mathematics/Chartered Professional Accountancy
Mathematics/Financial Analysis and Risk Management
Recreation and Sport Business
Science and Business

uwaterloo.ca/future/business
TRUE CALLING

For Esther, heading to work has taught her about mental health. Through her co-op experiences, she’s found her passion and seen the role therapeutic recreation can play in a person’s life.

“Building relationships with people who are experiencing mental health challenges has taught me about wellness and the role of therapy. My profs will simulate what it’s like to work in the field, with case studies and group projects, but it’s through real-world exposure that I’ve gained my deepest insights.”

#BEYOND IDEAS
#PURSUE YOUR PASSION
#TRIAL RUN
IMPROVE LIVES

Faculty of Applied Health Sciences

Want to make a difference that improves lives? Join this tight-knit community of students and professors dedicated to preventing disease, healing injuries, and optimizing the quality of life for people around the world. Learn relevant skills and concepts to prepare you for medical school, professional and graduate programs, or careers in health and leisure. You’ll graduate with a degree that will help you leave a lasting legacy of health and well-being.

ENTRY PROGRAMS AND MAJORS

Learn more about applied health sciences (AHS) entry programs and majors on pages 32 to 39, or go online to download an AHS brochure.

› Health Studies
› Kinesiology
› Public Health
› Recreation and Leisure Studies
  • Recreation and Leisure Studies
  • Recreation and Sport Business
  • Therapeutic Recreation
  • Tourism Development

You can focus your studies through specializations starting in second year.

54% of Health Studies and Kinesiology graduates go on to professional or graduate school

99% of AHS grads are employed or pursuing further education within a year of graduating

#1 for Hospitality and Leisure Management in Canada (QS World Rankings, 2019)

uwaterloo.ca/future/ahs
ILLUMINATE AND CREATE

Faculty of Arts

This is the place where creative minds and critical thinkers unite. Collaborate with peers and professors as you explore the diversity of the human experience and shine new light on age-old questions. Whether you’re in Accounting and Financial Management, Global Business and Digital Arts, or one of our 23 honours majors, you’ll benefit from the variety of academic departments you’ll interact with and the different perspectives they offer. You’ll graduate with the expertise employers need and the hands-on experience they want thanks to co-op terms, career-focused minors, study-abroad opportunities, and experiential education certificates.

ENTRY PROGRAMS
Learn more about arts entry programs, majors, and specializations on pages 32 to 39, or go online to download any of our arts brochures.
› Accounting and Financial Management
› Computing and Financial Management
› Global Business and Digital Arts
› Honours Arts*
› Honours Arts and Business*
› Social Development Studies

*Explore topics that interest you and pick your major at the end of first year.

PROFESSIONAL DEGREE
› Social Work (Renison University College)
Apply after completing your undergraduate degree.

MAJORS
You can build a second major, minor, or specialization into your degree after you choose a major in one of these subjects.
› Anthropology
› Classical Studies
› Economics
› English
› Fine Arts
› French
› Gender and Social Justice
› German
› History
› Legal Studies
› Medieval Studies
› Music
› Peace and Conflict Studies
› Philosophy
› Political Science
› Psychology
› Religious Studies
› Sexuality, Marriage, and Family Studies
› Social Development Studies
› Sociology
› Spanish
› Speech Communication
› Theatre and Performance

800+ courses in 59 different subjects
35% of honours students add a second major and/or a minor to their degree to broaden their studies
90 partner universities offer international study exchanges to arts students
WORLDLY WARRIOR

Why arts? Ask Ola, an international student majoring in Political Science with minors in Economics and International Trade, and she’ll tell you about systems and sustainability. “My goal is to affect change. The best way to do this is through political activism, for example, helping to draft laws that support countries and communities to become more self-reliant.”

At Waterloo, Ola is driving change beyond the classroom, through her co-op terms and as president of the Black Association for Student Expression.
WE RUN THIS

Who runs the world? Girls. Or is it engineers? Zahra argues it’s the combination that counts. A proud voice for women in science, technology, engineering, and mathematics (STEM), Zahra advocates that gender diversity brings fresh perspectives and ideas to the traditionally male-dominated field. The trick is helping women see their own potential.

“The problem is that we put ourselves down.” She challenges all high school students to be confident in their abilities, especially women studying math and science: “After all, if men can do it, why can’t we?”

#BEYONDIDEAS
#IRONRING
#YOUANDOIT

SHAPE
SOCIETY

Faculty of Engineering

Join the faculty with a hand in every aspect of modern life. You could design sustainable buildings, improve transit systems, reorganize corporate ladders, or build robots that save lives – all before graduation. In engineering, the future is in your hands. Are you ready to get to work?
ENTRY PROGRAMS

Learn more about each entry program on pages 32 to 39, or go online to download an engineering brochure.

→ Architectural 
→ Architecture 
→ Biomedical 
→ Chemical 
→ Civil 
→ Computer 
→ Electrical 
→ Environmental 
→ Geological 
→ Management 
→ Mechanical 
→ Mechatronics 
→ Nanotechnology 
→ Software 
→ Systems Design

You can choose to either specialize or broaden your studies through different program options and specializations beginning in second year.

TOP 50 engineering school in the world
(QS World Rankings, 2019)

$12,792 average earnings per co-op term

96% of our employed engineering grads find jobs related to the skills they gained at Waterloo within six months of graduation

uwaterloo.ca/future/engineering
Waterloo is renowned for its entrepreneurial spirit. It’s the reason Mila chose Planning at Waterloo. She knew it could be the place for her to discover how to dream big.

“What struck me most was the collaborative community here.” This environment allowed her team to design a battery that stores the energy created when pedaling a bike, which earned them second place in the school’s prestigious Jack Rosen Competition for sustainable innovation. “It’s incredible what can happen when you’re given the resources, support, and encouragement to develop ideas.”
RAISE THE BAR

Faculty of Environment

Join a global movement advocating for a greener, more sustainable future – whatever your #earthgoals. Learn how ecosystem restoration, environmental law, and urban planning support solutions to some of the world’s biggest challenges. Be an agent of change and build a better tomorrow with an environment degree.

ENTRY PROGRAMS
Learn more about environment entry programs and optional specializations on pages 32 to 39, or go online to download an environment brochure.

› Environment and Business
› Environment, Resources and Sustainability
› Geography and Aviation
› Geography and Environmental Management
› Geomatics
› International Development
› Knowledge Integration
› Planning

TOP 5 in Canada for Geography and Development studies (QS World Rankings, 2019)

#5 in the world for climate action (THE University Impact Rankings, 2019)

95.5% co-op employment rate
INFINITE OPEN DOORS

Faculty of Mathematics

Take your talent to the next level with a degree in mathematics or computer science. With more than 500 courses in every area of mathematics, statistics, and computer science, you’ll develop the theoretical and applied knowledge you need to succeed. Explore concepts that ignite your imagination, from quantum computing to number theory. Refine your skills through co-op terms, minors, and specializations. By graduation, your career prospects will be infinite.

ENTRY PROGRAMS AND MAJORS

Learn more about these programs on pages 32 to 39, or go online to download any of our brochures.

› Business Administration (Laurier) and Computer Science (Waterloo) Double Degree
› Business Administration (Laurier) and Mathematics (Waterloo) Double Degree
› Computer Science
  ■ Computer Science
  ■ Data Science
› Computing and Financial Management
› Mathematics
  ■ Actuarial Science
  ■ Applied Mathematics
  ■ Biostatistics
  ■ Combinatorics and Optimization
  ■ Computational Mathematics
  ■ Data Science
  ■ Mathematical Economics
  ■ Mathematical Finance
  ■ Mathematical Optimization
  ■ Mathematical Physics
  ■ Mathematics/Teaching
  ■ Mathematical Studies
  ■ Pure Mathematics
  ■ Statistics
› Mathematics/Business Administration
  ■ Information Technology Management
› Mathematics/Chartered Professional Accountancy
› Mathematics/Financial Analysis and Risk Management
  ■ Online degree available
› Software Engineering

TOP 50 in the world for Mathematics and Computer Science (QS World Rankings, 2019)

$13,608 average work term earnings for mathematics students

70% of the top careers in 2019 start with a mathematics or computer science degree (CareerCast)
You can’t limit creativity, and you certainly can’t limit Clare. A Schulich Leader Scholarship nominee, YouTube producer, scriptwriter, and aspiring mathematician, Clare doesn’t fit into a neat little box. She takes advantage of opportunities across campus to get involved and express herself.

During class, Clare explores “creative mathematics” in Combinatorics and Optimization. The rest of the time, she makes videos for her friends and lends her creative superpowers to FASS, Waterloo’s amateur theatre company, as a scriptwriter. Her advice for nervous newcomers: “leave your comfort zone! Explore new clubs and meet people! You’ll have more fun.”

#BEYONDIDEAS  #CREATIVEGENIUS  #PINKTIE
Use your curiosity, ingenuity, and passion for knowledge to discover everything from atoms and cells to the vast expanses of space in our most research-centric faculty. Learn to think critically, experiment confidently, and engage intelligently through hands-on labs, projects, and co-op terms. Participate in groundbreaking research or launch a startup through Velocity Science. Whichever path you choose to explore, your science degree will give you the foundation you need to succeed.
When Carson chose his major in Earth Sciences, he imagined spending time in the field, studying rocks, and bonding with nature. So when he landed a summer job in Nunavut charting rocks and living in a tent, he knew he’d made the right choice.

“It was like nothing I’d ever experienced, and yet it was exactly how I imagined myself,” says Carson. “Solving mysteries within the Earth fascinates me, and there’s still so much we don’t understand about the world around us. Geology is like a giant puzzle with many possible outcomes. I love that.”

#BEYONDIDEAS
#TENTLIFE
#BEBOULDER

ROCK’N IT

7 science-related clubs to meet other students and build connections within your faculty

100+ courses give you hands-on lab experience

$50M+ in annual research funding helps to finance meaningful research jobs for science students

ENTRY PROGRAMS AND MAJORS

Learn more about these programs on pages 32 to 39, or go online to download any of our science brochures.

› Biotechnology/Chartered Professional Accountancy
› Biotechnology/Economics
› Environmental Science
› Honours Science
› Life Sciences*
  ● Biochemistry
  ● Biology
  ● Biomedical Sciences
  ● Psychology
› Physical Sciences*
  ● Chemistry
  ● Earth Sciences
  ● Life Physics
  ● Materials and Nanosciences
  ● Mathematical Physics
  ● Medicinal Chemistry
  ● Physics
  ● Physics and Astronomy
› Science and Aviation
› Science and Business

*Select your major when you apply.

PROFESSIONAL DEGREES

Apply to a recommended Bachelor of Science (BSc) program to meet admission requirements for these programs.

› Doctor of Optometry (OD)
  Apply as early as your third year in a BSc program.
› Doctor of Pharmacy (PharmD)
  Apply as early as your second year in a BSc or other post-secondary program.

uwaterloo.ca/future/science
PROGRAM DETAILS

The finer points.

Use the program descriptions together with the admission charts to choose a program that suits your interests and academic strengths. Every program has minimum course and grade requirements you’ll need to meet, so take your time, do your research, and always check the asterisks!

uwaterloo.ca/future/programs
ACCOUNTING AND FINANCIAL MANAGEMENT / FACULTY OF ARTS AND SCHOOL OF ACCOUNTING AND FINANCE
(E, Bachelor of Accounting and Financial Management) Co-op only
Two areas of expertise, one serious career edge. Study accounting, finance, and business, and how they interrelate. Extend your leaning through co-op work terms and extracurricular opportunities while working toward a Chartered Professional Accountant (CPA) and/or Chartered Financial Analyst (CFA) designation. Questions? Email atm@uwaterloo.ca.
Accountant, auditor, Investment banker

ACTUARIAL SCIENCE / FACULTY OF MATHEMATICS
(M, Bachelor of Mathematics) Co-op available
Predict the future – without a crystal ball. In one of North America’s top-ranked actuarial science programs, you’ll use math and statistics to predict uncertain events such as stock market performance or an insurance company’s payouts. Prepare for your professional actuary designation with courses in finance, risk theory, pensions mathematics, and more.
Corporative Finance, Applied Probability, Introduction to Investments
Actuarial analyst, consultant, financial analyst

ANTHROPOLOGY / FACULTY OF ARTS
(M, Bachelor of Arts) Co-op available
From Neanderthals to Millennials, discover what it means to be human. Explore evolution and early societies, or study contemporary issues such as violence and media. Whether you’re examining fossils and bones in the lab or conducting fieldwork in the Mediterranean, the Arctic, or Africa, you’ll learn more about what makes our species tick.
Biological Anthropology, Skeletal Biology and Forensics, Archaeological Field School
Archaeologist, curator of natural property, heritage planner

APPLIED MATHEMATICS / FACULTY OF MATHEMATICS
(M, Bachelor of Mathematics) Co-op available
Use your math skills to push boundaries. Apply your understanding of mathematical concepts, computer science, and other disciplines to complex communication and control-system issues. Round out your degree with engineering electives, or specialize in biology, economics, earth sciences, physics, or scientific computation.
Applied Complex Analysis, Introduction to Computational Mathematics, Introduction to Differential Equations
Researcher, software developer, analyst

ARCHITECTURAL ENGINEERING / FACULTY OF ENGINEERING
(E, Bachelor of Applied Science) Co-op only
Build better buildings (and a bright career in the process). In Waterloo’s newest engineering program, you’ll cover the science of good building design, including mechanics, building systems, structural analysis, and structural design – and round it out with courses in aesthetics, culture, and other design elements at our world-class School of Architectural Studies.
Structural Design Studio, History of the Built Environment, Architectural Graphics Studio, Electrical Circuits and Instrumentation
Building design consultant, project manager, designer, construction consultant

ARCHITECTURE / SCHOOL OF ARCHITECTURE
(E, Bachelor of Architectural Studies) Co-op only
Create the blueprints for a great career in one of North America’s top schools of architecture. From day one, you’ll have your own dedicated studio space to develop your ideas as you explore the relationship between architecture, the environment, and society. In fourth year, study at our studio in Rome. Questions? Email architecture@uwaterloo.ca.
Architect, project manager, designer, architectural assistant

BIOCHEMISTRY / FACULTY OF SCIENCE
(M, Bachelor of Science) Co-op available
Play with the building blocks of life. Combine classroom courses in biology and chemistry with extensive lab work (where you’ll learn things like chromatography, electrophoresis, and protein analysis). You’ll graduate ready for careers in forensic technologies, medical diagnostics, agriculture, biotechnology, and more.
Fundamentals of Metabolism, Analytical Chemistry, Genetics
Biotechnology
Toxicologist, biomaterials researcher, health-care professional

BIOLOGY / FACULTY OF SCIENCE
(M, Bachelor of Science) Co-op available
Study life: it’s in your DNA. With more than 80 courses available – including labs and fieldwork – this program gives you lots of opportunity to explore the functioning of living organisms, where they come from, and how they evolve. You can also choose our Bioinformatics option, combining biological studies and computer science.
Fundamentals of Microbiology, Principles of Human Physiology, Diversity of Life
Animal Biology, Biotechnology, Environmental Biology, Microbiology, Molecular Genetics, Plant Biology
Biologist, veterinarian, environmental consultant, physician, pharmacist, optometrist

BIOMEDICAL ENGINEERING / FACULTY OF ENGINEERING
(E, Bachelor of Applied Science) Co-op only
Create tomorrow’s life-saving and life-enhancing innovations. In this interdisciplinary program, you’ll study engineering principles in biology, mechanics, physics, systems analysis, and design. With plenty of hands-on experience in biological and medical systems, you’ll graduate ready to develop new technology for health care or athletics.
Introduction to Biomedical Design, Engineering Biology, Anatomical Systems Modelling
Research and development of medical devices, biomedical data analysis, product design of sporting equipment

BIOMEDICAL SCIENCES / FACULTY OF SCIENCE
(M, Bachelor of Science) Regular only
Paging future doctors – and dentists and chiropractors and other health-care professionals. This flexible program provides the foundation and experience required to succeed in virtually any professional health program in North America. Plus, it gives you room to add a minor or pursue a variety of personal interests to round out your degree.
Human Anatomy, Biology of Human Aging, Cell Biology of Human Disease
Optometrist, pharmacist, physician

BIOSTATISTICS / FACULTY OF MATHEMATICS
(M, Bachelor of Mathematics) Co-op available
Fight illness with a healthy dose of data. In Biostatistics, you’ll focus on clinical, public, and population health statistics. You’ll also take specialized upper-year courses, graduating with the strong data-based decision-making skills you need to be part of an effective health-care research team.
Introduction to Medical Statistics, Management Information Systems, Statistical Methods for Life History Analysis
Medical researcher, data analyst, project manager

BIOTECHNOLOGY/CHARTERED PROFESSIONAL ACCOUNTANCY / FACULTY OF SCIENCE AND SCHOOL OF ACCOUNTING AND FINANCE
(E, Bachelor of Science) Co-op only
Spreadsheets plus science and paid co-op experience for actuarial roles in life insurance companies. This unique program prepares you for professional accountancy and advisory roles in the growing biotech sector. After graduation, earn your Master of Accounting (M.Acc) degree in only eight months – an optional next step in becoming a Chartered Professional Accountant.
Molecular Biotechnology, Introduction to Managerial Accounting, Accounting Information Systems
Accountant, finance coordinator, analyst

BIOTECHNOLOGY/ECONOMICS / FACULTY OF SCIENCE
(E, Bachelor of Science) Co-op only
Earn a science degree with economic punch. In Canada’s only program to integrate biotechnology, economics, and paid co-op work terms, you’ll learn to apply business knowledge to industrial and scientific technologies. Graduate ready to help the world capitalize on biotech breakthroughs, from tumour-fighting immune cells to oil-eating bacteria.
Fermentation Biotechnology, Biostatistics and Experimental Design, Economic Analysis
Economist, biotechnologist, business and customer insights analyst, financial security advisor

BUSINESS ADMINISTRATION (LAURIER) AND COMPUTER SCIENCE (WATERLOO) DOUBLE DEGREE / DAVID R. CHERTON SCHOOL OF COMPUTER SCIENCE
(E, Bachelor of Business Administration and Bachelor of Computer Science) Co-op only
Combine the worlds of bytes and business – and earn two degrees in five years. In one of the top computer science programs in Canada, you’ll learn about software, algorithms, programming, and the limits of computation. At nearby Wilfrid Laurier University, you’ll study business essentials like brand communication, accounting, and marketing.
Designing Functional Programs, Understanding the Business Environment, Computer Organization and Design
Business analyst, software engineer, application developer

BUSINESS ADMINISTRATION (LAURIER) AND MATHEMATICS (WATERLOO) DOUBLE DEGREE / FACULTY OF MATHEMATICS
(E, Bachelor of Business Administration and Bachelor of Mathematics) Co-op only
Five years, two degrees, one serious idea. Combine Waterloo’s strength in mathematics with the business expertise of Wilfrid Laurier University, and earn two prestigious degrees in the time it takes to earn one co-op degree. You’ll graduate from one of Canada’s most technical business programs with analytical and problem-solving skills that will set you apart.
Financial Mathematics, Information Systems Management, Introduction to Optimization
Securities trader, management analyst, corporate strategist
C

CHEMICAL ENGINEERING / FACULTY OF ENGINEERING (E, Bachelor of Applied Science) Co-op only
Discover how to transform raw materials, while putting your problem solving to the test. You'll learn to design, implement, and supervise the processes that transform fuel into energy, waste into resources, and raw materials into useful products in almost any industry: biotechnology, pollution control, green fuels, power storage, and more.

- Materials Science and Engineering, Bioprocess Engineering, Process Analysis and Design
- Design and construction of pharmacies, manufacturing of microelectronics, process engineering of petrochemicals

CHEMISTRY / FACULTY OF SCIENCE (M, Bachelor of Science) Co-op available
Fire up the Bunsen burners in one of Canada's top 10 chemistry programs. You'll learn from leading experts in the industry, work with advanced chemical instrumentation in our labs, and participate in cutting-edge research. This program is accredited by the Canadian Society for Chemistry and the Chemical Institute of Canada.

- Multi-Component Analysis, Structure and Bonding, Introductory Quantum Mechanics
- Bio-based Chemistry, Computational Chemistry (not available in the regular stream of study)
- Analytical chemist, chemistry patents agent, forensic scientist

CIVIL ENGINEERING / FACULTY OF ENGINEERING (E, Bachelor of Applied Science) Co-op only
Make the world your sandbox in Canada's largest civil engineering program. Learn to design, construct, and manage the infrastructure we all depend on: bridges, highways, dams, pollution-control facilities, and more. Tailor your degree to your specific interests, with specialization options such as transportation, structures, and water resources.

- Engineering and Sustainable Development, Transportation, Application with Structural Design, Geotechnical Engineering
- Design and construction of stadiums and entertainment facilities, implementation of water systems, construction site management

CLASSICAL STUDIES / FACULTY OF ARTS (M, Bachelor of Arts) Co-op available
Dive into the roots of Western civilization. Gain a deep understanding of history, culture, literature, religion, art, philosophy, and society in ancient Greece and Rome – cultures that continue to shape our thinking and our society today. Take advantage of study-abroad opportunities in the Mediterranean. Language courses are optional.

- Greek Art and Architecture, Astrology and Magic, Roman History
- Project manager, reference librarian, academic manager

COMBINATORICS AND OPTIMIZATION / FACULTY OF MATHEMATICS (M, Bachelor of Mathematics) Co-op available
Master two of math’s most powerful techniques. Combinatorics focuses on finite structures, while optimization explores ways to make an operation more efficient. Through courses in cryptography, graph theory, and linear programming, you'll learn how to apply these ideas to problems in areas ranging from security to scheduling to risk analysis.

- Introduction to Combinatorics, Introduction to Optimization, Coding Theory
- Developer, analyst, researcher

COMPUTATIONAL MATHEMATICS / FACULTY OF MATHEMATICS (M, Bachelor of Mathematics) Co-op available
Get ready to solve industrial-sized problems. In one of the world's top schools for math and computer science, learn to analyze data sets and formulate to better understand the world around us. You’ll develop computer modeling skills to tackle logistical problems found in business, economics, engineering, finance, medicine, and science.

- Data Structures and Data Management, Logic and Computation, Computer Simulation of Complex Systems
- Project manager, enterprise architect, software developer

COMPUTER ENGINEERING / FACULTY OF ENGINEERING (E, Bachelor of Applied Science) Co-op only
Why choose? Develop software savvy and hardware know-how. Build and test computer hardware and software in our state-of-the-art labs. You’ll work with everything from smartphones to massive engineered systems. With 70+ computer science courses and loads of options and electives, you’ll have lots of freedom to explore your interests. Questions? Email future-ugrad@cs.uwaterloo.ca.

- Designing Functional Programs, Data Structures and Data Management, The Social Implications of Computing
- Software developer, web developer, project manager

COMPUTING AND FINANCIAL MANAGEMENT / SCHOOL OF ACCOUNTING AND FINANCE AND DAVID R. CHERTON SCHOOL OF COMPUTER SCIENCE (E or M, Bachelor of Computer Science or Bachelor of Mathematics) Co-op available
Earn a degree that computes. At one of the world's best schools for computer science, you’ll develop a broad understanding in areas including systems and networks, algorithms, and software engineering. With 70+ computer science courses and loads of options and electives, you’ll have lots of freedom to explore your interests. Questions? Email future-ugrad@cs.uwaterloo.ca.

- Object-Oriented Software Development, Regression and Forecasting Methods in Finance, Equity Investments
- Software developer, quantitative analyst, investment banking analyst

DATA SCIENCE / DAVID R. CHERTON SCHOOL OF COMPUTER SCIENCE (E, Bachelor of Computer Science or Bachelor of Mathematics) Co-op available
Make sense of the tsunami of data produced by business, scientific, and social activity. Develop the foundation in computing systems, data analytics, statistics, and machine learning you need to extract meaningful information from data. You’ll graduate with the skills to help governments and businesses make better decisions.

- Computer Organization and Design, Data Visualization, Data Structures and Data Management
- Data scientist, statistician, business analyst

E

EARTH SCIENCES / FACULTY OF SCIENCE (M, Bachelor of Science) Co-op available
Launch a career that rocks. Explore the world under your feet in close-knit classes and through field experiences led by professors known internationally for their geological and water research. You’ll graduate ready to develop meaningful environmental protection plans, predict natural disasters, advance health standards for water, and more.

- Earth System Science, Petrology, Mineralogy
- Geology, Geophysics, or Hydrogeology
- Hydrogeologist, geologist, geophysicist

ECONOMICS / FACULTY OF ARTS (M, Bachelor of Arts) Co-op available
From piggybanks to the World Bank, learn how wealth is produced, distributed, and consumed - and how it shapes society, politics, and culture. You’ll cover the fundamentals of micro- and macroeconomics and analyze how these principles play out in a wide range of sectors, including finance, public policy, and international economics.

- Economics of Sport, Business Finance, Environmental Economics
- Econometrics, Finance, or Public Policy
- Financial planner, marketing research manager, economist, financial analyst, international finance manager

ELECTRICAL ENGINEERING / FACULTY OF ENGINEERING (E, Bachelor of Applied Science) Co-op only
Set yourself up for an electrifying future – explore electronic devices, control systems, and digital systems in some of North America’s best electrical engineering student labs. By mastering the design principles required to build the latest technologies in power, information, and energy, you’ll open the door to hundreds of possible careers!

- Digital Circuits and Systems, Electromagnetic Fields and Waves, Embedded Microprocessor Systems
- Product development of telecommunications systems, software quality assurance analysis, electric equipment manufacturing

ENGLISH / FACULTY OF ARTS (M, Bachelor of Arts) Co-op available
Go way beyond emojis. Our 150+ undergraduate courses give you all kinds of opportunity to explore the written word. Examine English language, and new media while honing your skills as a communicator. Choose to focus your studies in Literature, Literature and Rhetoric, or Rhetoric, Media, and Professional Communication.

- Popular Potter, Game Studies, Global Shakespeare
- Creative Writing, Digital Media Studies, Global Literatures, Technical Writing
- Communications manager, media relations specialist, technical writer, publisher, social media strategist

ENVIRONMENT AND BUSINESS / FACULTY OF ENVIRONMENT (E, Bachelor of Environmental Studies) Co-op only
Eco-warrior, meet business mogul. The only program of its kind in Canada, this degree gives you an in-depth knowledge of environmental issues and the business world. Cover everything from stakeholder engagement and industrial ecology to finance, project management, marketing, and more. Then, put it all into practice in co-op work terms.

- International Corporate Responsibility, Green Entrepreneurship, Business Finance
- Sustainability analyst, environmental stewardship manager, environmental policy advisor
Sample courses

- Children's Literature in French
- Applied Wetland Science
- Sustainability Assessment, Environmental Modelling
- Ecosystem Assessment

Co-op available

Chez Waterloo, les possibilités sont innombrables. College at Nipissing University.

Your focus. Want more? Add the Teaching Specialization in Québec or France, or live on the French-language program. A French degree gives you a valuable edge in a wide variety of careers. Want to learn more? Get a French degree.

Director of international sales, immigration consultant.

FACULTY OF ENVIRONMENT / FACULTY OF ENGINEERING (E, Bachelor of Applied Science) Co-op available

Save the planet with a degree from Canada’s largest environmental engineering program. Combine the technical rigour of engineering with a broad education in chemistry, biology, geology, and more. You'll graduate ready to clean up the world's water, soil, and air pollution – and to prevent future environmental problems.

- Air Quality Engineering, Environmental and Sustainability Assessment; Environmental Modelling
- Product design for air pollution control systems, process design for water treatment, protection and revitalization of ecosystems

ENVIRONMENTAL SCIENCE / FACULTY OF SCIENCE (E, Bachelor of Science) Co-op available

Earn a science degree. Save the planet. Ranked among the top 10 in Canada, this program gives you a scientist's perspective of ecological and geological systems. You'll graduate with the knowledge, creativity, and expertise to create a more sustainable world.

- Organismal and Evolutionary Ecology, Geomorphology and GIS Applications
- Applied Wetland Science
- Ecology, Geoscience, or Water Science
- Geoscientist, ecologist, environmental consultant

ENVIRONMENTAL MANAGEMENT / FACULTY OF ENVIRONMENT (E, Bachelor of Environmental Studies) Co-op available

Make the world your classroom. Explore how people shape our planet as you delve into Earth's physical and human systems and hone your technical skills in environmental analysis. Learn about climate change, landforms, population growth, Geographic Information Systems, and other key topics in one of Canada's top-ranked geography programs.

- Global Environmental Systems, Local Development in a Global Context, Earth's Future Climates
- Environmental stewardship coordinator, sustainability consultant, teacher

GEOLICAL ENGINEERING / FACULTY OF ENGINEERING (E, Bachelor of Applied Science) Co-op only

Put your future on solid ground – and help the world do the same. You'll combine earth sciences with civil engineering to design sustainable structures, mitigate and reduce losses during natural disasters, and contribute to sustainable resource development globally. Meanwhile, with a ton of field courses, you'll spend more time outside the classroom than in any other engineering program.

- Engineering Geology, Structural Geology
- Design and Integration of terrain sensors, hazard and risk assessment of landslides and earthquakes, design of surface and subsurface infrastructure

GEOINFORMICS / FACULTY OF ENVIRONMENT (E, Bachelor of Environmental Studies) Co-op available

Geotag, you're it! Tap into Waterloo’s world-class computer science expertise when you join this fast-growing field that combines the power of computing with geographic and environmental analysis. Learn to use tools such as remote sensing, computer mapping, GPS, and Geographic Information Systems (GIS) to analyze data and make meaningful decisions.

- Earth from Space Using Remote Sensing, Geodesy and Surveying, Geoweb and Location-based Services
- Data analyst, GIS operator, remote sensing specialist

PROGRAM DESCRIPTIONS | 35
Pursue your passions. Shape your future. Explore a variety of subjects, or immerse yourself in one of 23 arts majors. Choose to add co-op, and get up to 20 months of paid work experience before you graduate. Refer to your specific major of interest (M) for more details. This program is offered through the main Waterloo campus, St. Jerome’s University, and Renison University College.

**HONOURS ARTS / FACULTY OF ARTS (E, Bachelor of Arts)** Co-op available

Follow your passion for arts and gain business know-how: combine one of our 23 arts majors with business studies. Opt for co-op and tap into North America’s largest pool of co-op employers. Refer to your specific major of interest (M) for details. After applying, you may co-register with St. Jerome’s University or Renison University College.

**HONOURS SCIENCE / FACULTY OF SCIENCE (E, Bachelor of Science) Regular only**

Deciding is difficult. If you’re still exploring which sciences intrigue you the most, Honours Science is a brilliant choice. You’ll have the flexibility to take the courses you want or handpick the ones you need, which is convenient if you plan to apply to a professional school with prerequisite course requirements.
- Cell Biology, Modern Physics, Geochemistry
- Physician, optometrist, pharmacist, genetic counsellor, teacher

**INFORMATION TECHNOLOGY MANAGEMENT / FACULTY OF MATHEMATICS (M, Bachelor of Mathematics) Co-op available**

Become fluent in IT talk and business jargon. Combine computer science studies in systems analysis, e-business, and networks with business courses such as marketing, project management, and statistics. You’ll graduate with the ability to apply IT solutions to business processes and bridge the gap between CEO and computer specialist.
- Management Information Systems, Electronic Business, Computer Applications in Business: Databases
- Business systems analyst, web developer, database administrator

**INTERNATIONAL DEVELOPMENT / FACULTY OF ENVIRONMENT (E, Bachelor of Environmental Studies) Regular only**

Get the toolkit you need to build a better world. Tackle issues of economic inequality, social injustice, and environmental change, and apply your skills on an eight-month overseas placement. You’ll graduate knowing how to design development projects that are ethical, environmentally sustainable, culturally responsible, and evidence-based.
- Problem-Solving for Development, Global Cities in a Global Development, Introduction to Social Entrepreneurship
- Not-for-profit program manager, international partnership manager, grant officer

**KINESIOLOGY / FACULTY OF APPLIED HEALTH SCIENCES (E, Bachelor of Science) Co-op available**

Make a smart play: study the science of human movement. In this multidisciplinary program, you’ll gain hands-on skills in preventing, assessing, and treating movement-related illness and injury (and study anatomy on real human cadavers). Choose from four kinesiology areas: specialization and prepare for professional programs in medicine, chiropractic, or physiotherapy.
- Human Anatomy: Limbs and Trunk, Fundamentals of Neuroscience, Musculoskeletal Injuries in Work and Sport
- Ergonomics and Injury Prevention, Human Nutrition, Medical Physiology, Rehabilitation Sciences
- Health professional (e.g., medical doctor, physical therapist, occupational therapist, athletic therapist, kinesiologist, chiropractor), ergonomist, rehabilitation specialist

**KNOWLEDGE INTEGRATION / FACULTY OF ENVIRONMENT (E, Bachelor of Knowledge Integration) Regular only**

Discover the freedom to pursue all your passions. More than a mix of arts and science, this program is built around a core set of skills that equip you to understand and solve tough problems, communicate effectively, and make a difference in a complex and changing world. Choose a traditional specialization or create one that is uniquely yours.
- Collaboration, Design Thinking, and Problem Solving: Nature of Scientific Knowledge; Creative Thinking
- Collaborative Design; Science, Technology, and Society
- Business analyst, design strategist, user experience researcher

**LEGAL STUDIES / FACULTY OF ARTS (M, Bachelor of Arts)** Co-op available

Judge the impact of the legal system. (No gavel required.) Explore the law and courts from the viewpoint of political science, history, sociology, philosophy, and peace and conflict studies. Because law touches almost every aspect of society, this degree is great preparation for a career in government, business, law enforcement, or law itself.
- Criminology, Women and the Law, Children’s Rights in Canada
- Legal assistant, records clerk, executive researcher, probation and parole officer, lawyer

**LIFE PHYSICS / FACULTY OF SCIENCE (M, Bachelor of Science) Co-op available**

Rocket science, meet medical science. Prepare for professions such as radiation oncology and medical imaging that harness the power of physics. This flexible, interdisciplinary program gives you a solid foundation in physics, chemistry, and biology, with plenty of hands-on labs and opportunities to get involved in research.
- Biophysics of Imaging, Modelling Life Physics, Molecular and Cellular Biophysics
- Biophysics, Medical Physics
- Medical physicist, physician, biophysicist

**LIFE SCIENCES / FACULTY OF SCIENCE (E, Bachelor of Science) Co-op available for some majors**

If you want to study the science of living things, this is your starting point. Life Sciences is an entry program for the following majors (M): Biochemistry, Biology, Biomedical Sciences, or Psychology. Refer to your specific major of interest for details.

**MANAGEMENT ENGINEERING / FACULTY OF ENGINEERING (E, Bachelor of Applied Science) Co-op only**

Make a smooth career move by making processes flow better. You’ll study industrial engineering principles, advanced data analytics, mathematical modelling, and computer programming to optimize processes in any organization. You’ll become an invaluable asset to employers, solving complex technical and management problems in a variety of industries.
- Simulation Analysis and Design, Supply Chain Management, Data Warehousing and Mining, Principles of Software Engineering
- Data scientist, management consultant, industrial engineer, business analyst, project and product manager

**MATERIALS AND NANOSCIENCES / FACULTY OF SCIENCE (M, Bachelor of Science) Co-op available**

Tiny subject matter; Huge opportunities. Discover how to manipulate individual atoms and molecules, applying chemistry and physics at the nanoscale. There’s no better place to learn than in Canada’s Quantum Valley. You’ll graduate with the tools and knowledge to work at the forefront of innovation, in fields like renewable energy and nanomedicine.
- Materials and Nanosciences in the Modern World, Chemistry and the Solid State, Condensed Matter Physics
- Materials scientist, nanotechnologist, materials process specialist

**MATHEMATICAL ECONOMICS / FACULTY OF MATHEMATICS (M, Bachelor of Mathematics) Co-op available**

Do the math that underpins economies. Learn about the mathematical models that drive economic theory and how to use differential calculus, differential equations, and mathematical optimization to understand and predict economic behaviour. You’ll graduate ready for a career with banks, government, or industry, or for a master’s or doctoral program.
- Microeconomic Theory, Macroeconomic Theory, Differential Equations for Business and Economics
- Business analyst, econometrician, consultant

**MATHEMATICAL FINANCE / FACULTY OF MATHEMATICS (M, Bachelor of Mathematics) Co-op available**

Study equations that include dollar signs, and join other elite math students in one of the world’s most advanced undergraduate finance programs. You’ll explore the math behind financial markets. Study corporate finance, asset-liability management, statistics, forecasting, and more – everything you need for a high-flying career in banking and finance.
- Introduction to Investments, Forecasting, Real Analysis
- Controller, compliance analyst, investment policy analyst

**MATHEMATICAL OPTIMIZATION / FACULTY OF MATHEMATICS (M, Bachelor of Mathematics) Co-op available**

Find solutions to resource scarcity issues, from streamlining sports team schedules to making factories more efficient. You’ll study mathematical modeling in your optimization, probability, statistics, and computer science courses and hone your skills with case studies. Then round out your degree with business, economics, and management science.
- Introduction to Computational Mathematics, Computer Simulation of Complex Systems, Portfolio Optimization Models
- Business, Operations Research
- Business analyst, information technology architect, risk analyst
M = Major; subject of major interest, apply through an entry-level program
S = Sample courses
P = Specializations
C = Career possibilities

MATHEMATICAL PHYSICS / FACULTY OF MATHEMATICS
(M, Bachelor of Mathematics) Co-op available
Master advanced math to decode everything from the cosmos to quantum computing. You’ll study high-level math and physics at Canada’s only faculty of mathematics and one of Canada’s most innovative departments of physics. Then choose a career in the semiconductor industry, telecommunications, or medical technology – or go on to graduate studies.
- Waves, Electricity and Magnetism; Introduction to Theoretical Mechanics; Quantum Theory
- Operations specialist, information technology architect, lecturer

MATHEMATICAL PHYSICS / FACULTY OF SCIENCE
(M, Bachelor of Science) Co-op available
Dig deeper into physics with a serious helping of math. Take advantage of Canada’s only faculty of mathematics and one of Canada’s most innovative departments of physics to explore both subjects in depth. It’s great grounding for careers involving anything from the theoretical foundations of technology to the unified theories of nature.
- Modern Physics, Quantum Theory, Classical Mechanics and Special Relativity
- Theoretical physicist, data scientist, quantitative analyst

MATHEMATICS / FACULTY OF MATHEMATICS
(E, Bachelor of Mathematics) Co-op available

MATHEMATICS/BUSINESS ADMINISTRATION / FACULTY OF MATHEMATICS
(E, Bachelor of Mathematics) Co-op available
It’s a simple equation: math + business = career success. Build your degree with courses from two prestigious institutions: math courses from Waterloo’s Faculty of Mathematics and business courses from Wilfrid Laurier University. You’ll graduate with the technical expertise and analytical know-how to thrive in the world of business.
- Corporate Finance, Introduction to Managerial Accounting, Organizational Behaviour
- Operations manager, risk modelling analyst, investor relations specialist

MATHEMATICS/CHARTERED PROFESSIONAL ACCOUNTANCY / FACULTY OF MATHEMATICS AND SCHOOL OF ACCOUNTING AND FINANCE
(E, Bachelor of Mathematics) Co-op only
- Really understand the numbers. In this one-of-a-kind program, you’ll earn a Bachelor of Mathematics as you prepare for a career as a Chartered Professional Accountant (CPA). You’ll acquire a strong background in the mathematical field of your choice, along with equally focused studies in accounting, economics, and business.
  - Introduction to Financial Accounting, Cost Management Systems, Corporate Finance
  - Accountant, controller, auditor

MATHEMATICS/FINANCIAL ANALYSIS AND RISK MANAGEMENT / FACULTY OF MATHEMATICS
(E, Bachelor of Mathematics) Co-op available
Crunch numbers, calculate odds, and create career success in this challenging program – one of just a few across Canada recognized by the CFA Institute and PRMIA. You’ll combine mathematics with finance, accounting, economics, and risk management. Specialize in chartered financial analysis or risk management, and graduate ready for your professional exams.
- Computational Methods in Business and Finance, Applied Linear Models and Process Improvement for Business, Commercial and Business Law for Mathematics Students
- Financial analyst, risk analyst, investment analyst

MATHEMATICS/TEACHING / FACULTY OF MATHEMATICS
(M, Bachelor of Mathematics) Co-op only
Inspire the next generation as a high school math teacher. Combine your math, statistics, and computer science courses with eight months of classroom experience – more than any other Bachelor of Education preparatory program in Canada – before you apply to teachers’ college. Want to do some of your learning overseas? Opt for our four-month Math in Europe program.
- Introduction to Mathematics Education, Educational Psychology, Mathematical Discovery and Invention
- Teacher, online learning consultant, instructional media developer

MECHANICAL ENGINEERING / FACULTY OF ENGINEERING
(E, Bachelor of Applied Science) Co-op only
Put your career in gear. This program gives you a broad foundation in all aspects of mechanical design – and lots of opportunities to get your hands dirty in our well-equipped labs. You’ll study factors like the environment, safety, manufacturing, and materials, so you’ll graduate with the knowledge to design everything from switches to spacecrafts.
- Aerodynamics, Industrial Metallurgy, Electromechanical Devices and Power Processing, Heat Transfer
- Design of aerospace accessories, manufacturing of wind turbines, research and development in automotive technologies

MEDICATRONICS ENGINEERING / FACULTY OF ENGINEERING
(E, Bachelor of Applied Science) Co-op only
Build the next generation of “smart” machines, emergency response drones, and driverless cars. You’ll combine mechanical, electrical, computer, and software engineering to develop robots, intelligent vehicles, and more. With co-op and labs starting in first year, you’ll gain lots of experience creating sophisticated electro-mechanical devices.
- Sensors and Instrumentation, Microprocessors and Digital Logic, Structure and Properties of Materials
- Manufacturing and programming of robotic devices, design of biomedical instruments, design and creation of wearable technology

MEDICINAL CHEMISTRY / FACULTY OF SCIENCE
(M, Bachelor of Science) Co-op only
Explore the science of drug discovery. In this exciting program, you’ll take courses in computer-aided drug design and gain valuable work experience in places like pharmaceutical companies and hospitals. By graduation, you’ll know how to design, synthesise, and evaluate potential medications – ready to create the life-saving treatments of tomorrow.
- Chemical Kinetics, Transition Element Compounds and Inorganic Materials, Fundamentals of Metabolism
- Medicinal chemist, research chemist, synthetic chemist

MEDIEVAL STUDIES / FACULTY OF ARTS
(M, Bachelor of Arts) Co-op available
Immerse yourself in the Middle Ages – minus the dysentery – in Canada’s longest-standing Medieval Studies program. By concentrating on this crucial era in Western civilization, you’ll gain insights into European politics, modern gender norms, the connections between Islam and Christianity, and more. (You can even study abroad in a castle!)
- Crusading in the Middle Ages, Medieval Society, The History of Islamic Civilization
- Professional writer, librarian, historical site manager, teacher

MUSIC / FACULTY OF ARTS
(M, Bachelor of Arts) Co-op available
Explore Beethoven to Bieber, salons to software. Learn about the importance of music in today’s world through theory, composition, performance, and history. Combine your passion for music with other interests by taking courses that address the vital intersection of music and technology, film, global culture, and psychology.
- Music Cognition, Introduction to Jazz, Soundtracks: Music in Film
- Church Music and Worship, Music in Global Context, Music and Peace
- Teacher, performer, associate pastor of music, music store owner, recording studio owner

NANOTECHNOLOGY ENGINEERING / FACULTY OF ENGINEERING
(E, Bachelor of Applied Science) Co-op only
Design solutions measured in billions of a metre in Canada’s only undergraduate nanotechnology engineering program. Combining engineering principles with ideas from chemistry, electronics, quantum physics, and biology, you’ll create the tiny technologies that are revolutionizing everything from smartphones to food processing to cancer treatment.
- Nanotechnology, Quantum Mechanics, Societal and Environmental Impacts of Nanotechnology
- Research and development for pharmaceuticals, design of advanced materials for electronic devices, manufacturing of medical instruments

OPTOMETRY / SCHOOL OF OPTOMETRY AND VISION SCIENCE
(Doctor of Optometry) Regular only/
Apply to a recommended accredited Bachelor of Science program to meet requirements
Set your sights on a career in vision health. After three years in a Bachelor of Science program, you can apply to Canada’s only English-language Doctor of Optometry program. Learn about ocular health and disease, optics, and vision, while applying your knowledge in clinical settings. Questions? Email opt-admissions@uwaterloo.ca.
- Diseases of the Eye, Practice Management, Neurophysiology of Vision
- Registered optometrist, careers in private practice, academia, and industry
PEACE AND CONFLICT STUDIES / FACULTY OF ARTS
(M, Bachelor of Arts) Co-op available
Choose a degree that can change the world. Develop diverse approaches to understanding conflict and promoting peace through Canada's first peace studies program. Discover how to transform conflict's violent potential into a creative force for positive change. Gain experience through an internship locally or in a former conflict zone abroad.

- Human Rights, Peace, and Business
- Conflict Resolution; Restorative Justice
- Gender in War and Peace
- Community development officer, international development specialist, social services worker, policy advisor, mediation consultant, lawyer

PHARMACY / SCHOOL OF PHARMACY (Doctor of Pharmacy) Co-op only / Apply to a recommended Bachelor of Science program (or other approved post-secondary program) to meet requirements.

A prescription for career success! After two years in an undergraduate science program, you can apply to Canada's only co-op Pharmacy program. Enhance your classroom learning with paid work terms, research, and community service, developing skills in community practice, hospitals, or family health teams. Questions? Email pharmacy@uwaterloo.ca.

- Integrated Patient Focused Care, Professional Practice, Medical Microbiology
- Registered pharmacist, work in community practice, hospitals, and family health teams

PHILOSOPHY / FACULTY OF ARTS (M, Bachelor of Arts) Co-op available
Confront some of life's biggest questions. Study ancient texts and modern thinking on topics ranging from the nature of the human mind to emerging issues in science and technology. Learn to analyze other people's arguments and improve your own. You'll develop the critical-thinking skills valued in public policy, industry, and beyond.

- Foundations of Ethics, Probability and Decision Making, Philosophy of Mind
- Lawyer, public policy analyst, ethicist, corporate archivist

PHYSICS / FACULTY OF SCIENCE (E, Bachelor of Science) Co-op available
Investigate what makes the physical world tick. This is an entry program for the following majors (M): Chemistry, Earth Sciences, Life Physics, Materials and Nanosciences, Mathematical Physics, Medicinal Chemistry, Physics, or Physics and Astronomy. Refer to your specific major of interest for details.

PHYSICS / FACULTY OF SCIENCE (M, Bachelor of Science) Co-op available
Become the next Einstein. (Wild hair optional.) Understand how the universe works: from quantum particles and exotic states of matter to curved space-time in the black hole. In one of Canada's largest and most comprehensive physics programs, prepare for graduate studies or a wide range of careers requiring advanced problem-solving skills.

- Geometrical and Physical Optics, Classical Mechanics and Special Relativity, Computational Physics
- Physicist, research and development scientist, physics teacher

PHYSICS AND ASTRONOMY / FACULTY OF SCIENCE (M, Bachelor of Science) Co-op available
Aim for a career with astronomical possibilities. Learn from award-winning professors who are studying some of the most fascinating phenomena in the universe: black holes, the Big Bang, dark matter, and more. It's perfect preparation for careers in astrophysics and space science or for graduate studies in astronomy or physics.

- Introduction to the Universe, Thermal Physics, Cosmology
- Astronomer, aerospace scientist, remote sensing scientist

PLANNING / FACULTY OF ENVIRONMENT (E, Bachelor of Environmental Studies) Co-op only
Want a career with impact? We've got the plan. Tackle the environmental and social challenges facing our urban and rural areas. Learn about sustainable planning practices, designing effective transit systems, protecting natural areas, and more. You'll graduate ready to help communities create a healthy, prosperous, and sustainable future.

- Social Concepts in Planning, Transportation Planning and Analysis, Urban Planning Design and the Environment
- Decision Support and Geographic Information Systems, Environmental Planning and Management, Land Development Planning, Urban Design
- Environmental planner, land use planner, urban designer, transit planner

POLITICAL SCIENCE / FACULTY OF ARTS (M, Bachelor of Arts) Co-op available
Let's get political! Explore political theory, power, global politics, and governance in one of the world's top 200 politics and international studies programs. Learn how to navigate (and shape) the political terrain and develop the critical-thinking and creative problem-solving skills to land a job in advocacy, policy, public service, or research.

- Globalization, International Business, and Development; Topics in Politics and Business; Global Environmental Governance
- Politics and Business, Global Governance, Canadian Politics, International Relations
- Civil servant, director of global programs, project manager, senior consultant

PSYCHOLOGY / FACULTY OF ARTS (M, Bachelor of Arts) Co-op available
Get inside people's heads. Explore the intricacies of the brain in this internationally renowned program, consistently ranked among the best in Canada. You'll examine human behaviour through a variety of perspectives, including neuroscience; cognition; and clinical, developmental, industrial/organizational, and social psychology – great preparation for further studies in speech and language, counseling, and marketing.

- Learning Disabilities, Basic Research Methods, Human Neuropsychology
- Mental health worker, research and development manager, human resources manager

PSYCHOLOGY / FACULTY OF SCIENCE (M, Bachelor of Science) Co-op available
Major in the science of the human mind. Investigate neuroscience; cognition; and clinical, developmental, and social psychology in one of North America's top psychology departments. You'll delve into research methods and data analysis – great preparation for further studies in medicine, speech pathology, or other health fields.

- Psychopathology, Psychological Measurement, Developmental Psychology
- Neuropsychologist, child psychologist, psychiatrist

PUBLIC HEALTH / FACULTY OF APPLIED HEALTH SCIENCES (E, Bachelor of Public Health) Co-op available
Doctors help a few dozen patients a day. Public health professionals help thousands. Discover how understanding social, cultural, political, and geographical factors can help us tackle smoking, obesity, infectious diseases, and more. Aiming for grad school? Get a head start by applying for an accelerated master's in your third year.

- Gerontology, Health Informatics, Health Research
- Community relations officer, public health planner, policy developer

PURE MATHEMATICS / FACULTY OF MATHEMATICS (M, Bachelor of Mathematics) Co-op available
Go way beyond basic arithmetic. Pure mathematics studies the boundary of math and pure reason, exploring the "how" and "why" of math. You'll cover the spectrum of mathematics – including algebra, number theory, analysis, geometry, and logic – and gain valuable problem-solving skills that can be applied in your career or graduate school.

- Fields and Galois Theory, Applied Complex Analysis, Differential Geometry
- Mathematical Finance, Mathematics/Teaching
- Data scientist, operations analyst, lecturer

RECREATION AND LEISURE STUDIES / FACULTY OF APPLIED HEALTH SCIENCES (E or M, Bachelor of Arts) Co-op available
It's about more than fun and games. Really. In one of North America's top-rated leisure departments, discover how to plan, manage, and deliver well-designed recreation programs that enhance the well-being of individuals and communities. Gain industry-related experience in your courses, through co-op, and in a 105-hour practicum.

- Program Management and Evaluation; Play, Creativity, and Child Development; Leisure and Social Justice
- Community recreation programmer, program and support services manager, recreation manager

RECREATION AND SPORT BUSINESS / FACULTY OF APPLIED HEALTH SCIENCES (M, Bachelor of Arts) Co-op available
You love sports. So make it your career with this one-of-a-kind degree. Gain a solid understanding of recreation and build the business expertise you need to excel in different aspects of the sports industry – including marketing, communications, HR, and finance. Learn from experts during your classes, co-op, a 105-hour practicum, or our exchange program with Walt Disney World Resort.

- Principles of High Performance Organizations in Recreation and Sport, Advanced Program Evaluation in Leisure Services, Marketing Resources for Recreation and Sport Delivery
- Recreation and events director, marketing manager, sport programming manager

RELIGIOUS STUDIES / FACULTY OF ARTS (M, Bachelor of Arts) Co-op available
Explore the fundamental beliefs that bind us – and divide us. Discover the world's great religions through more than 100 undergraduate courses covering Western and Eastern religions, the history of Christianity, biblical studies, theology, ethics, sociology, and the arts. Round off your degree with an optional four-month trek visiting holy sites across India.

- Religion in Popular Film, Sacred Beauty: Religion and the Arts, Love and Friendship
- Clinical therapist, interfaith chaplain, international development agency director
SCIENCE AND AVIATION / FACULTY OF SCIENCE
(E, Bachelor of Science) Regular only
Is your head in the clouds? Earn a Bachelor of Science degree and your Commercial Pilot Licence through the largest university aviation program in Canada. Customize your studies to include courses from a range of scientific disciplines, such as physics or earth sciences. Whichever route you choose, you'll graduate with more than 200 flight hours.
- Earth from Space Using Remote Sensing, Physical Climatology, Human Factors in Aviation
- Pilot, flight training instructor, aerial surveyor

SCIENCE AND BUSINESS / FACULTY OF SCIENCE
(E, Bachelor of Science) Co-op available
Can science majors make it big in business? You bet. Become a scientist with solid business skills or a business professional who speaks the language of science. This unique program provides a strong foundation in science, along with courses in accounting, economics, marketing, computing, statistics, and human resources.
- Biochemistry, Biology, Biotechnology
- Medical information specialist, biotechnology accounts manager, project and program analyst

SEXUALITY, MARRIAGE, AND FAMILY STUDIES / FACULTY OF ARTS
(M, Bachelor of Arts) Co-op available
Get ready to talk relationships. The only one of its kind in Canada, this program goes far beyond accounts manager, project and program analyst

SOCIAL DEVELOPMENT STUDIES / FACULTY OF ARTS
(E or M, Bachelor of Arts) Co-op available
through Honours Arts or Honours Arts and Business

SPEECH COMMUNICATION / FACULTY OF ARTS
(M, Bachelor of Arts) Co-op available
Testing one, two, three. In this program — the only one of its kind in Canada — you'll hone your skills as a communicator and discover how communication creates meaning in our world. Through creative, collaborative, and critical engagement, you'll prepare for a career in public relations, human relations, teaching, broadcasting, or marketing.
- Persuasion, Crisis Communication, Digital Presentations
- Strategic planning officer, communications officer, digital media coordinator

SOCIAL WORK / RENISON UNIVERSITY COLLEGE
(Bachelor of Social Work) Regular only
Have a hunger to help others? Prepare for a rewarding career while splitting your time between the classroom and in-field placements. This program is only available to students with an undergraduate degree. For a strong foundation, consider enrolling in Social Development Students. Questions? Email renison.socialwork@uwaterloo.ca.
- Diversity and Empowerment, Mental Health and Addiction Issues, Social Work with Older Adults
- Social worker, mental health clinician, counselor, therapist

SOFTWARE ENGINEERING / FACULTY OF ENGINEERING AND
FACULTY OF MATHEMATICS
(E, Bachelor of Software Engineering) Co-op only
Today, even your fridge is full of software. Learn to create complex programs using math, engineering, and computer science. You'll develop the skills to analyze software architecture, apply algorithms, design human-computer interfaces, and lead major projects.
- Programming Principles, Logic and Computation, Machine Learning, Computational Vision
- Design of operating systems, development of security systems, analysis and maintenance of web applications

SPANISH / FACULTY OF ARTS
(M, Bachelor of Arts) Co-op available
Say hola to an in-depth understanding of the Hispanic world. Explore the richness of Hispanic literature and culture while learning one of the world's most popular languages. Take advantage of our exchanges to Spain or Latin America, and consider adding a Diploma in Spanish-English Translation — one of only two such diplomas in Canada.
- Poetry of the Tango, Introduction to Spanish Business Translation, The Hispanic World Through Literature and the Arts
- Spanish/English Translation
- Librarian, marketing manager, senior manager, translator

THEATRE AND PERFORMANCE / FACULTY OF ARTS
(M, Bachelor of Arts) Co-op available
All the world's a stage. Find your place on it in one of Canada's most performance-intensive drama programs. Write theatre reviews, study stage direction, and reinvent theatre for today. Focus your studies in acting, directing, technical theatre, or theory; then hone your skills in student-led productions each term. You'll graduate with a rich portfolio!
- Stage Management, Approaches to Directing, Collaborative Creation
- Set designer, actor, floor director, stage manager, general manager

THERAPEUTIC RECREATION / FACULTY OF APPLIED HEALTH
SCIENCES
(M, Bachelor of Arts) Co-op available
Help people get more out of life. You'll learn how to enhance quality of life by improving physical and mental health through recreation programs that foster inclusivity and strengthen the cultural fabric of a community. Combine practical courses with hands-on experience through co-op, volunteer placements, and a required 560-hour internship in fourth year.
- Foundations of Therapeutic Recreation Practice, Therapeutic Recreation Facilitation Techniques, Therapeutic Recreation: Physical Disabilities
- Recreation therapist, elder life specialist, occupational therapist

TOURISM DEVELOPMENT / FACULTY OF APPLIED HEALTH
SCIENCES
(M, Bachelor of Arts) Co-op available
Want a career in tourism — the world's largest industry? This is your boarding call. Learn how to plan and develop tourism experiences in environmentally and culturally sensitive ways. Hone those skills in a 105-hour practicum, or take your learning off-campus with a study-abroad term at Walt Disney World Resort.
- Outdoor Recreation Resources Management, Tourism Analysis, Event Management
- Festival and events coordinator, policy researcher, director of parks and recreation

STATISTICS / FACULTY OF MATHEMATICS
(M, Bachelor of Mathematics) Co-op available
Earn a degree that's highly significant at one of the world's top centres for statistics. Learn about research methods and statistical applications to help engineers develop better AI technologies, researchers evaluate medical treatments, governments shape effective policies, and more. In today's data-driven world, these are skills in high demand!
- Applied Probability, Sampling and Experimental Design, Applied Linear Models
- Biostatistician, business intelligence specialist, software quality analyst

SYSTEMS DESIGN ENGINEERING / FACULTY OF ENGINEERING
(E, Bachelor of Applied Science) Co-op only
Take a creative, interdisciplinary approach to solving engineering problems. This flexible program features design courses, labs, and team-based learning that focus on the big picture. You'll develop skills from multiple engineering fields, graduating ready to tackle challenges that lie at the interface of society, technology, and the environment.
- Human Factors in Design, Computational Neuroscience, Systems Models, Software Design
- Design of medical devices, product manager, technology design and creation

PROGRAM DESCRIPTIONS | 39
INTERNATIONAL ADMISSION REQUIREMENTS

2020

AMERICAN SYSTEM

High School Diploma with prerequisite courses completed at the AP level and/or Grade 12 senior academic level.

NOTE:
min = minimum final grade, average = minimum final overall Grade 12 average.

INTERNATIONAL BACCALAUREATE SYSTEM

Six total IB courses, at least three must be HL. Total scores exclude Diploma points. Subjects required for admission to specific programs should be HL whenever possible. Where there are more than three prerequisite subjects, SL courses will be accepted. For programs listing HL or SL English A, HL English B with min 5 will be acceptable. For programs listing HL or SL Mathematics, Math Studies will not be accepted unless stated otherwise. For the new IB Math curriculum requirements, please visit our website.

NOTE:
HL = Higher Level, SL = Standard Level, min = minimum final grade, total = overall minimum grade total.

International Baccalaureate System

Possible. Where there are more than three the new IB Math curriculum requirements, see list on pages 20 to 31.

ACCOUNTING AND FINANCIAL MANAGEMENT

Co-op only. AIF required. Qualified applicants will be invited to complete an English précis-writing exercise and to submit a portfolio.

Accounting and Financial Management Admissions Assessment (AFMAA) Interview and Trait Assessment required.

Global Business and Digital Arts

Regular only.

Honours Arts

(Waterloo, St. Jerome’s, Renison) Regular and co-op.

Social Development Studies

(Renison) Regular only.

Honours Arts and Business

Regular and co-op. After applying, you may co-register through St. Jerome’s or Renison.

Computing and Financial Management

Co-op only. AIF required.

Recreation and Leisure Studies

† Co-op only. AIF required. Qualified applicants will be invited to complete an English Skills Assessment.

Mathematics/Business Administration

†, Co-op only. AIF required. Individual selection may vary.

Management, Mechanical, Mechatronics, Nanotechnology, Systems Design

Co-op only. AIF required. Individual selection may vary.

Mathematics/Chartered Professional Accountancy

Co-op only. AIF required. Individual selection may vary.

Biotechnology/Chartered Professional Accountancy

Co-op only. AIF required. Individual selection may vary.
# AMERICAN AND INTERNATIONAL BACCALAUREATE SYSTEMS

## AMERICAN SYSTEM

<table>
<thead>
<tr>
<th>Grade 12 Chemistry and Grade 12 Biology (preferably one at the AP level); Grade 12 Mathematics and Grade 12 English, min 75% in each. Average 85%.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honours Pre-Calculus or AP Calculus, Senior-Level Chemistry, Grade 12 English, min 75% in each. One of Biology or Physics, min 75% (preferably at the AP level, min 3). Average 85%.</td>
</tr>
<tr>
<td>Grade 12 English, min 80%. Grade 12 Mathematics, min 75%. Average 85%.</td>
</tr>
<tr>
<td>Grade 12 English, min 75%. Average 85%.</td>
</tr>
<tr>
<td>Grade 12 English, min 80%. AP Calculus and Algebra (Pre-Calculus), min 80% in each. Average 88%.</td>
</tr>
<tr>
<td>Grade 12 English, min 80%. Average 85%.</td>
</tr>
<tr>
<td>Grade 12 English, min 75%. Average 85%.</td>
</tr>
<tr>
<td>Grade 12 English, min 75%. Average 85%.</td>
</tr>
<tr>
<td>AP Calculus exam, min 4. Algebra (Pre-Calculus), Grade 12 English, min 75%. Average 90%.</td>
</tr>
<tr>
<td>AP Calculus (or equivalent), AP Physics (or equivalent), and Algebra (Pre-Calculus), min 76% in each. Grade 12 English, min 80%. Plus two additional Grade 12 courses. Average 88%.</td>
</tr>
<tr>
<td>AP Calculus (or equivalent), AP Physics (or equivalent), Algebra (Pre-Calculus), Chemistry, Grade 12 English, and one other Grade 12 academic course, min 75% in each. Average 88% in the six required courses. SATs or ACTs required.</td>
</tr>
<tr>
<td>AP Calculus (or equivalent), AP Physics (or equivalent), Algebra (Pre-Calculus), Chemistry, Grade 12 English, and one other Grade 12 academic course, min 75% in each. Average 88% in the six required courses. SATs or ACTs required.</td>
</tr>
<tr>
<td>Grade 12 English, min 75%. Average 85%.</td>
</tr>
<tr>
<td>Grade 12 English, min 75%. Average 85%.</td>
</tr>
<tr>
<td>Grade 12 English and Grade 12 Mathematics, min 75% in each. Strongly recommended: one Grade 12 course in Physical or Environmental Science. Average 85%.</td>
</tr>
<tr>
<td>Grade 12 English, min 75%. Grade 12 Mathematics, min 75%. Average 85%.</td>
</tr>
<tr>
<td>Grade 12 English, min 75%. Average 85%.</td>
</tr>
<tr>
<td>Grade 12 English, Grade 12 Mathematics, and Grade 12 Science, min 80% in each. Average 85%.</td>
</tr>
<tr>
<td>Grade 12 English, min 80%. Average 85%.</td>
</tr>
<tr>
<td>AP Calculus exam, min 4. Algebra (Pre-Calculus), Grade 12 English, Average 90%.</td>
</tr>
<tr>
<td>AP Calculus exam, min 4. Algebra (Pre-Calculus), Grade 12 English, Average 90%.</td>
</tr>
<tr>
<td>AP Calculus exam, min 4. Algebra (Pre-Calculus), Grade 12 English, Average 90%.</td>
</tr>
<tr>
<td>AP Calculus (preferred) or Grade 12 Calculus, min 80%. Grade 12 English, min 80%. Algebra (Pre-Calculus). Two of Biology, Chemistry, Physics, or Statistics. One other Grade 12 academic or AP course. Average 85%, including required courses; except for Biotechnology/Chartered Professional Accountancy: average 94%; and for Biotechnology/Economics: average 87%.</td>
</tr>
</tbody>
</table>

## INTERNATIONAL BACCALAUREATE SYSTEM

<table>
<thead>
<tr>
<th>HL or SL Chemistry (HL recommended), HL or SL Biology, and HL or SL Mathematics or SL Math Studies, min 4 in each. HL or SL English A, min 4, or HL English B, min 5. Total 28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics (HL recommended) and Chemistry (HL recommended), min 4 in each. One of HL or SL Physics or Biology, min 4. HL or SL English A, min 4, or HL English B, min 5. Total 28</td>
</tr>
<tr>
<td>HL or SL English A, min 4, or HL English B, min 5. HL or SL Mathematics, or SL Math Studies, min 4. Total 28</td>
</tr>
<tr>
<td>HL or SL English A, min 4, or HL English B, min 5. Total 28</td>
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<tr>
<td>HL or SL English A, min 4, or HL English B, min 5. Total 28</td>
</tr>
<tr>
<td>HL or SL English A, min 4, or HL English B, min 5. Total 28</td>
</tr>
<tr>
<td>HL or SL English A, min 4, or HL English B, min 5. Total 28</td>
</tr>
<tr>
<td>HL or SL Mathematics, min 6. HL or SL English A, min 4, or HL English B, min 5. Total 32</td>
</tr>
<tr>
<td>Mathematics and Physics (HL recommended), min 4 in each. HL or SL English A, min 4, Total 32.</td>
</tr>
<tr>
<td>Mathematics and Physics (HL recommended), min 4 in each. Chemistry and English A, min 6 in each. One other HL or SL course, min 4. Total 32. 6s and 7s recommended for competitive programs.</td>
</tr>
<tr>
<td>Mathematics and Physics (HL recommended), min 4 in each. Chemistry and English A, min 4 in each. One other HL or SL course, min 4. Total 32. 6s and 7s recommended for competitive programs.</td>
</tr>
<tr>
<td>HL or SL English A, min 4, or HL English B, min 5. Total 27</td>
</tr>
<tr>
<td>HL or SL English A, min 4, or HL English B, min 5. Total 27</td>
</tr>
<tr>
<td>HL or SL English A, min 4, or HL English B, min 5. Total 27</td>
</tr>
<tr>
<td>HL or SL English A, min 4, or HL English B, min 5. Total 27</td>
</tr>
<tr>
<td>HL or SL English A, min 4, or HL English B, min 5. Total 27</td>
</tr>
<tr>
<td>HL or SL Mathematics, min 6. HL or SL English A, min 4, or HL English B, min 5. Total 32</td>
</tr>
<tr>
<td>HL or SL Mathematics, min 6. HL or SL English A, min 4, or HL English B, min 5. Total 32</td>
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<td>HL or SL Mathematics, min 6. HL or SL English A, min 4, or HL English B, min 5. Total 32</td>
</tr>
<tr>
<td>HL or SL Mathematics, min 6. HL or SL English A, min 4, or HL English B, min 5. Total 32</td>
</tr>
</tbody>
</table>

### AMERICAN AND INTERNATIONAL BACCALAUREATE SYSTEMS (Continued)

### Grade 12 requirements:
- **Chemistry:** Senior-Level or Grade 12.
- **Biology:** Senior-Level or Grade 12.
- **Mathematics:** Senior-Level or Grade 12.
- **English:** Senior-Level or Grade 12.

### Admission Requirements:
- **American System:**
  - **Chemistry:** Grade 12 Mathematics and Grade 12 English, min 75% in each. Average 85%.
  - **Biology:** Honours Pre-Calculus or AP Calculus, Senior-Level Chemistry, Grade 12 English, min 75% in each. One of Biology or Physics, min 75% (preferably at the AP level, min 3). Average 85%.
  - **Mathematics:** Grade 12 English, min 80%. Grade 12 Mathematics, min 75%. Average 85%.
  - **English:** Grade 12 English, min 75%. Average 85%.

- **International System:**
  - **Chemistry:** HL or SL Mathematics (HL recommended), HL or SL Biology, and HL or SL Mathematics or SL Math Studies, min 4 in each. HL or SL English A, min 4, or HL English B, min 5. Total 28.
  - **Biology:** Mathematics (HL recommended) and Chemistry (HL recommended), min 4 in each. One of HL or SL Physics or Biology, min 4. HL or SL English A, min 4, or HL English B, min 5. Total 28.
  - **Mathematics:** HL or SL English A, min 4, or HL English B, min 5. HL or SL Mathematics, or SL Math Studies, min 4. Total 28.
  - **English:** HL or SL English A, min 4, or HL English B, min 5. Total 28.
  - **Total:** 28. 6s and 7s recommended for competitive programs.

### Grade 12 English Requirements:
- **Minimum:** Grade 12 English, min 75% in each. Average 85%.

### Additional Requirements:
- **AP Calculus (or equivalent):** AP Calculus exam, min 4. Algebra (Pre-Calculus), Grade 12 English, Average 90%.
- **AP Calculus (or equivalent):** AP Calculus (or equivalent), AP Physics (or equivalent), and Algebra (Pre-Calculus), min 80% in each. Average 88%.
- **AP Calculus (or equivalent):** AP Calculus (or equivalent), AP Physics (or equivalent), Algebra (Pre-Calculus), Chemistry, Grade 12 English, and one other Grade 12 academic course, min 75% in each. Average 88% in the six required courses. SATs or ACTs required.

### Application Process:
- **Preparation:**
  - **Grade 12:** Senior-Level Chemistry and Senior-Level Biology (preferably one at the AP level); Grade 12 Mathematics and Grade 12 English, min 75% in each. Average 85%.
  - **Honours:** Honours Pre-Calculus or AP Calculus, Senior-Level Chemistry, Grade 12 English, min 75% in each. One of Biology or Physics, min 75% (preferably at the AP level, min 3). Average 85%.

### Further Information:
- For more details, visit the University of Waterloo's official website or contact the admissions office directly.

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**Note:** The information provided is for reference purposes only and may change without notice. It is recommended to consult the official source for the most up-to-date and accurate information.
INTERNATIONAL ADMISSION REQUIREMENTS
2020

NOTES
Minimum admission requirements are subject to change. For some programs the demand for places by qualified applicants exceeds the number of places available. *Choose your major; see lists on pages 20 to 31.
AIF: Admission Information Form
uwaterloo.ca/future/admissions

INDIAN SYSTEM
First or Second Division standing in one of the following: (1) All India Senior School Certificate awarded by CBSE or (2) Indian School Certificate awarded by CISCE, or (3) other pre-university certificate awarded after 12 years of academic studies. Final grades will be evaluated based on board results.

NOTE:
Std XII • Standard XII, min • minimum final grade, overall • overall minimum final average.

BRITISH SYSTEM
General Certificate of Secondary Education or equivalent with passes in at least five unique subjects, three of which must be at the Advanced Level. General paper is not accepted for the English course requirements.

NOTE:
min • minimum final grade.

PROGRAM (APPLY TO)/SYSTEM OF STUDY/ADDITIONAL REQUIREMENTS
APPLIED HEALTH SCIENCES
Health Studies Regular and co-op.
Kinesiology Regular and co-op.
Public Health Regular and co-op.
Recreation and Leisure Studies† Regular and co-op.

ARTS
Accounting and Financial Management Co-op only, Accounting and Financial Management Admissions Assessment (AFMAA) Interview and Trait Assessment.
Global Business and Digital Arts Regular only.
Honours Arts† (Waterloo, St. Jerome’s, Renison) Regular and co-op.
Social Development Studies (Renison) Regular only.
Honours Arts and Business† Regular and co-op. After applying, you may co-register through St. Jerome’s or Renison.

CFM
Computing and Financial Management Co-op only. AIF required.

ENGINEERING
Architecture Co-op only. AIF required. Qualified applicants will be invited to complete an English précis-writing exercise and to submit a portfolio.
Architectural, Biomedical, Chemical, Civil, Computer, Electrical, Environmental, Geological, Management, Mechanical, Mechatronics, Nanotechnology, Systems Design Co-op only. AIF required. Online video interview required for faculty scholarships and strongly recommended for admission to all programs. Individual selection may vary.

SOFTWARE ENGINEERING
Software Engineering Co-op only. Experience developing well-structured, modular programs is required. AIF required. Online video interview required for faculty scholarships and strongly recommended for admission. Individual selection may vary.

ENVIRONMENT
Environment and Business Co-op only.
Environment, Resources and Sustainability; Geography and Environmental Management Regular and co-op.
Geography and Aviation Regular only. Program Briefing Session and Transport Canada Category 1 Aviation Medical Certification required.
Geomatics Regular and co-op.
International Development Regular only.
Knowledge Integration Regular only.
Planning Co-op only.

MATHEMATICS
Business Administration (Laurier) and Computer Science (Waterloo), Business Administration (Laurier) and Mathematics (Waterloo) — Double Degrees Co-op only. AIF required. Individual selection may vary.
Computer Science† Regular and co-op, AIF required. Individual selection may vary.
Mathematics/Chartered Professional Accountancy Co-op only. AIF required. Individual selection may vary.

SCIENCE
Biotechnology/Chartered Professional Accountancy Co-op only. Biotechnology/Economics Co-op only. Environmental Science, Life Sciences†, Physical Sciences†, Science and Business Regular and co-op. Honours Science Regular only, Science and Aviation Regular only, Program Briefing Session, Transport Canada Category 1 Medical Certification required.
<table>
<thead>
<tr>
<th>INDIAN SYSTEM</th>
<th>BRITISH SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std XII Chemistry, Std XII Biology, Std XII Mathematics and Std XII English, min 70% in each. Overall 80% Std XII.</td>
<td>A-level Chemistry and A-level Biology, min B in each. A-level Mathematics, min C, English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII Mathematics, Std XII Chemistry and Std XII English, min 70% in each. One of Std XII Physics or Std XII Biology, min 70%. Overall 80% Std XII.</td>
<td>A-level Mathematics, min C. A-level Chemistry, min B. One additional A-level, min B. One of Physics or Biology at the GCSE, AS, or A-level, min B. English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII English, min 75%. Std XII Mathematics, min 70%. Overall 80% Std XII.</td>
<td>A-level Mathematics, min C. Two other A-level courses, min B. English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII English, min 70%. Overall 80% Std XII.</td>
<td>Three A-level courses, two B's and one C English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII English, min 75%. Std XII Mathematics, min 75%. Overall 85% Std XII.</td>
<td>A-level Mathematics, min B, and two other A-level courses, min B in each. English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII English, min 75%. Overall 80% Std XII.</td>
<td>Three A-level courses, two B’s and one C English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII English, min 70%. Overall 80% Std XII.</td>
<td>Three A-level courses, two B’s and one C English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII English, min 70%. Overall 80% Std XII.</td>
<td>Three A-level courses, two B’s and one C English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII Mathematics and one other Std XII academic course, min 90% in each. Std XII English, min 75%. All Std XII courses: min 85%.</td>
<td>A-level Mathematics and two other academic A-level courses, min A in each. English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII Mathematics; Std XII Physics, min 70%; Std XII English, min 75%; and two other Std XII courses, Overall 80% Std XII.</td>
<td>A-level Mathematics and A-level Physics, min B in each. One additional A-level, min B. English at either the GCSE, AS, or A-level, min B. One additional course at the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII Mathematics, Std XII Physics, Std XII Chemistry, Std XII English, and one other Std XII course, min 70% in each. Overall 85% in the five required courses.</td>
<td>A-level Mathematics and A-level Physics, min A in each. One additional A-level, min B. Chemistry (GCSE-level required, A-level recommended), min B. GCSE-level English, min B. A’s and A*’s recommended for competitive programs.</td>
</tr>
<tr>
<td>Std XII Mathematics, Std XII Physics, Std XII Chemistry, Std XII English, and one other Std XII course, min 70% in each. Overall 85% in the five required courses.</td>
<td>A-level Mathematics and A-level Physics, min A in each. One additional A-level, min B. Chemistry (GCSE-level required, A-level recommended), min B. GCSE-level English, min B. A’s and A*’s recommended for competitive programs.</td>
</tr>
<tr>
<td>Std XII English, min 70%. Overall 80% Std XII.</td>
<td>Three A-level courses, two B’s and one C English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII English and Std XII Mathematics, min 70% in each. Strongly recommended: one of Std XII Physical or Environmental Science. Overall 80% Std XII.</td>
<td>A-level Mathematics, min B. Two other A-level courses, min B and C. Strongly recommended: one A-level course in Physical or Environmental Science. English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII English and Std XII Mathematics, min 70% in each. Overall 80% Std XII.</td>
<td>A-level Mathematics, min B. Two other A-level courses, min B and C. English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII English and Std XII Mathematics, and one Std XII Science course, min 75% in each. Overall 80% Std XII.</td>
<td>A-level Mathematics, and one A-level Science course, min B in each. Overall 80% Std XII.</td>
</tr>
<tr>
<td>Std XII English, min 75%. Overall 80% Std XII.</td>
<td>A-level Mathematics, and one A-level Science course, min B in each. One additional A-level course, min C. English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII Mathematics, min 90%. Std XII English, One other Std XII course, min 90%. All Std XII courses: min 85%.</td>
<td>A-level Mathematics, min A. Two other academic A-level courses, min A in each. English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII Mathematics, min 90%. Std XII English, One other Std XII course, min 90%. All Std XII courses: min 85%.</td>
<td>A-level Mathematics, min A. Two other academic A-level courses, min A in each. English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII Mathematics, min 85%. Std XII English. One other Std XII course, min 85%. All Std XII courses: min 80%.</td>
<td>A-level Mathematics, min A. Two other academic A-level courses, min A in each. English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII Mathematics, min 85%. Std XII English. One other Std XII course, min 85%. All Std XII courses: min 80%.</td>
<td>A-level Mathematics, min A. Two other academic A-level courses, min A in each. English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII Mathematics, min 90%. Std XII English. One other Std XII course, min 90%. All Std XII courses: min 85%.</td>
<td>A-level Mathematics, min A. Two other academic A-level courses, min A in each. English at either the GCSE, AS, or A-level, min B.</td>
</tr>
<tr>
<td>Std XII Mathematics, min 70%. Std XII English, min 70%. Two of Std XII Biology, Std XII Chemistry, or Std XII Physics. One other Std XII course. Overall 80%, including required courses; except for Biotechnology/Chartered Professional Accountancy; overall 94%, and for Biotechnology/Economics: overall 85%.</td>
<td>A-level Mathematics, min B. Two of Biology, Chemistry or Physics (one must be A-level, min B). One other academic A-level, min B. GCSE-level English, min B. Higher grades required for Biotechnology/Chartered Professional Accountancy and Biotechnology/Economics.</td>
</tr>
</tbody>
</table>
INTERNATIONAL ADMISSION REQUIREMENTS 2020

CARIBBEAN ADVANCED PROFICIENCY EXAMINATION

Caribbean Secondary Education Certificate with passes in at least five subjects, two of which must be at the Unit 2 level.

CHINESE SYSTEM

Chinese High School Diploma. Completion of a minimum of five Senior 3 academic courses. Hui Kao examination results.

NOTE:

- min = minimum final grade.
- overall = minimum overall final average.
- min = minimum final grade.
- Unit 1, or Unit 2 level, min 3.
- Unit 2 Mathematics, min 2. One other Unit 2 course, min 3. English at the CXC, Unit 1, or Unit 2 level, min 3.
- Senior 3 Mathematics, min 90%. Senior 3 English. Overall 85% in Senior 3.
- Unit 2 Pure Mathematics, min 2. One other Unit 2 academic course, min 2.
- Two Unit 2 courses, min 2 in one and 3 in the other. English at the CXC, Unit 1, or Unit 2 level, min 3.
- Senior 3 Mathematics, min 90%. Senior 3 English. Overall 85% in Senior 3.
- Unit 2 Pure Mathematics, min 2. One other Unit 2 academic course, min 2.
- Two Unit 2 courses, min 2 in one and 3 in the other. English at the CXC, Unit 1, or Unit 2 level, min 3.
- Senior 3 Mathematics, min 90%. Senior 3 English. Overall 85% in Senior 3.
- Unit 2 Pure Mathematics, min 2. One other Unit 2 academic course, min 2.

APPLICATION TIPS

- If you’re from a high school outside of North America and not following the American, British, Caribbean Advanced Proficiency Examination, Chinese, Indian, or International Baccalaureate system of study, you should attach course descriptions for senior-level mathematics along with your transcripts.
- Repeated courses may be taken into consideration, depending on the program.
- Engineering, mathematics, and science programs may consider GCSE-level English as a Second Language, provided that you also submit a satisfactory English language test score.

NOTES

Minimum admission requirements are subject to change. For some programs the demand for places by qualified applicants exceeds the number of places available. *Choose your major: see lists on pages 20 to 31.

AIF: Admission Information Form

uwaterloo.ca/future/admissions

PROGRAM (APPLY TO)/SYSTEM OF STUDY/ADDITIONAL REQUIREMENTS

<table>
<thead>
<tr>
<th>APPLIED HEALTH SCIENCES</th>
<th>ARTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Studies</td>
<td>Accounting and Financial Management</td>
</tr>
<tr>
<td>Regular and co-op.</td>
<td>Co-op only, Accounting and Financial Management Admissions Assessment (AFMAA) Interview and Trial Assessment required.</td>
</tr>
<tr>
<td>Kinesiology</td>
<td>Global Business and Digital Arts</td>
</tr>
<tr>
<td>Regular and co-op.</td>
<td>Regular only.</td>
</tr>
<tr>
<td>Public Health</td>
<td>Honours Arts¹ (Waterloo, St. Jerome’s, Renison) Regular and co-op.</td>
</tr>
<tr>
<td>Regular and co-op.</td>
<td>Social Development Studies (Renison) Regular only.</td>
</tr>
<tr>
<td>Recreation and Leisure Studies¹</td>
<td>Honours Arts and Business¹ Regular and co-op. After applying, you may co-register through St. Jerome’s or Renison.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOFTWARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computing and Financial Management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENGINEERING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture</td>
</tr>
<tr>
<td>Architectural, Biomedical, Chemical, Civil, Computer, Electrical, Environmental, Geological, Management, Mechanical, Mechatronics, Nanotechnology, Systems Design</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENVIRONMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment and Business</td>
</tr>
<tr>
<td>Environment, Resources and Sustainability; Geography and Environmental Management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geography and Aviation</td>
</tr>
<tr>
<td>Geomatics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SCIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Administration (Laurier) and Computer Science (Waterloo), Business Administration (Laurier) and Mathematics (Waterloo) — Double Degrees</td>
</tr>
<tr>
<td>Computer Science¹</td>
</tr>
<tr>
<td>Mathematics¹, Mathematics/Business Administration¹, Mathematics/Financial Analysis and Risk Management</td>
</tr>
<tr>
<td>Mathematics/Chartered Professional Accountancy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BIOTECHNOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biotechnology/Chartered Professional Accountancy</td>
</tr>
<tr>
<td>PROGRAM (APPLY TO)/SYSTEM OF STUDY/ADDITIONAL REQUIREMENTS</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
</tr>
<tr>
<td>Planning</td>
</tr>
<tr>
<td>Geomatics</td>
</tr>
<tr>
<td>Environment and Business</td>
</tr>
<tr>
<td>Management</td>
</tr>
<tr>
<td>and Mathematics (Waterloo) — Double Degrees</td>
</tr>
<tr>
<td>Architecture</td>
</tr>
<tr>
<td>Computing and Financial Management</td>
</tr>
<tr>
<td>Recreation and Leisure Studies</td>
</tr>
<tr>
<td>Kinesiology</td>
</tr>
<tr>
<td>Health Studies</td>
</tr>
<tr>
<td>Software Engineering</td>
</tr>
<tr>
<td>CARIBBEAN ADVANCED PROFICIENCY EXAMINATION</td>
</tr>
<tr>
<td>Unit 2 Chemistry and Unit 2 Biology, min 2 in each. Mathematics and English at the CXC, Unit 1, or Unit 2 level, min 2 in each.</td>
</tr>
<tr>
<td>Unit 2 Mathematics and Unit 2 Chemistry, min 2 in each. One of Physics or Biology at the CXC, Unit 1, or Unit 2 level, min 2. English at the CXC, Unit 1 or Unit 2 level, min 2.</td>
</tr>
<tr>
<td>Unit 2 Mathematics, min 2. One other Unit 2 course, min 3. English at the CXC, Unit 1, or Unit 2 level, min 3.</td>
</tr>
<tr>
<td>Two Unit 2 courses, min 2 in one and min 3 in the other. English at the CXC, Unit 1, or Unit 2 level, min 3.</td>
</tr>
<tr>
<td>Unit 2 Pure Mathematics, min 2. One other Unit 2 course, min 2. English at the CXC, Unit 1, or Unit 2 level, min 2.</td>
</tr>
<tr>
<td>Two Unit 2 courses, min 2 in one and 3 in the other. English at the CXC, Unit 1, or Unit 2 level, min 2.</td>
</tr>
<tr>
<td>Two Unit 2 courses, min 2 in one and 3 in the other. English at the CXC, Unit 1, or Unit 2 level, min 3.</td>
</tr>
<tr>
<td>Two Unit 2 courses, min 2 in one and 3 in the other. English at the CXC, Unit 1, or Unit 2 level, min 3.</td>
</tr>
<tr>
<td>Unit 2 Pure Mathematics, min 2. One other Unit 2 academic course, min 2. English at the CXC, Unit 1, or Unit 2 level, min 2.</td>
</tr>
<tr>
<td>Unit 2 Pure Mathematics and Unit 2 Physics, min 2 in each. English at the CXC, Unit 1, or Unit 2 level, min 2. Two other Unit 1 or Unit 2 academic courses, min 2 in each.</td>
</tr>
<tr>
<td>Unit 2 Pure Mathematics and Unit 2 Physics, min 2 in each. Chemistry and English (CXC required, CAPE recommended), min 2 in each. One other Unit 1 or Unit 2 academic course, min 2. Mostly 1's recommended for competitive programs.</td>
</tr>
<tr>
<td>Unit 2 Pure Mathematics and Unit 2 Physics, min 2 in each. Chemistry and English (CXC required, CAPE recommended), min 2 in each. One other Unit 1 or Unit 2 academic course, min 2. Mostly 1's recommended for competitive programs.</td>
</tr>
<tr>
<td>Two Unit 2 courses, min 2 in one and 3 in the other. English at the CXC Unit 1, or Unit 2 level, min 3.</td>
</tr>
<tr>
<td>Two Unit 2 courses, min 2 in one and 3 in the other. English at the CXC, Unit 1, or Unit 2 level, min 3.</td>
</tr>
<tr>
<td>Unit 2 Mathematics, min 2. One other Unit 2 course, min 3. English at the CXC, Unit 1, or Unit 2 level, min 3. Strongly recommended: one Unit 2 course in Physical or Environmental Science.</td>
</tr>
<tr>
<td>Unit 2 Mathematics, min 2. One other Unit 2 course, min 3. English at the CXC, Unit 1, or Unit 2 level, min 3.</td>
</tr>
<tr>
<td>Two Unit 2 courses, min 2 in one and 3 in the other. English at the CXC, Unit 1, or Unit 2 level, min 3.</td>
</tr>
<tr>
<td>Unit 2 Mathematics and Unit 2 Science, min 2 in each. English at the CXC, Unit 1, or Unit 2 level, min 2.</td>
</tr>
<tr>
<td>Two Unit 2 courses, min 2 in one and 3 in the other. English at the CXC, Unit 1, or Unit 2 level, min 2.</td>
</tr>
<tr>
<td>Unit 2 Pure Mathematics, min 2. One other Unit 2 academic course, min 2. English at the CXC, Unit 1, or Unit 2 level.</td>
</tr>
<tr>
<td>Unit 2 Pure Mathematics, min 2. One other Unit 2 academic course, min 2. English at the CXC, Unit 1, or Unit 2 level.</td>
</tr>
<tr>
<td>Unit 2 Pure Mathematics, min 2. One other Unit 2 academic course, min 2. English at the CXC, Unit 1, or Unit 2 level.</td>
</tr>
<tr>
<td>Unit 2 Pure Mathematics, min 3. English at the CXC, Unit 1, or Unit 2 level, min 2. Two of Biology, Chemistry, Environmental Science, or Physics (one must be at the Unit 2 level, min 2). Higher grades required for Biotechnology/Chartered Professional Accountancy and Biotechnology/Economics.</td>
</tr>
</tbody>
</table>
Why make things complicated? Simply tear off the checklist on page 49 and complete each step by the deadline. You’ll be a Warrior in no time. If you have any questions, flip over the checklist to find a list of key contacts.

**HOW DO I GET STARTED?**

Your first stop is the Ontario Universities’ Application Centre (OUAC) website: [ouac.on.ca](http://ouac.on.ca).

Complete the 105 application and make arrangements to have your high school send us your transcripts. All of your official documents, including transcripts and English language test results, must be sent directly from the issuing institution or testing authority.

### WHEN ARE MY APPLICATION AND SUPPORTING DOCUMENTS DUE?

<table>
<thead>
<tr>
<th>FALL TERM</th>
<th>DATE APPLICATION INFORMATION AND FEES MUST REACH OUAC</th>
<th>DATE DOCUMENTS MUST REACH WATERLOO</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2020 — Most programs</td>
<td>March 27, 2020</td>
<td>April 3, 2020</td>
</tr>
</tbody>
</table>

**EXCEPTIONS**

- **Architecture**: January 31, 2020 | February 28, 2020
- **Accounting and Financial Management**: January 31, 2020 | February 28, 2020
- **Conditional Admission to Pharmacy**: January 31, 2020 | April 3, 2020
- **Engineering, Software Engineering**: January 31, 2020 | February 28, 2020
- **Mathematics**: January 31, 2020 | February 28, 2020

### WHAT ABOUT ENGLISH LANGUAGE TEST SCORES?

You must meet or exceed the minimum scores required for one of the options listed below if your first language is not English and you have not studied in an English-language school system for the four years immediately before beginning your studies at Waterloo.

<table>
<thead>
<tr>
<th>OPTION 1</th>
<th>OPTION 2</th>
<th>OPTION 3</th>
<th>OPTION 4</th>
<th>OPTION 5</th>
<th>OPTION 6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTERNET-BASED TOEFL</strong></td>
<td><strong>IELTS</strong></td>
<td><strong>MELAB</strong></td>
<td><strong>CAEL</strong></td>
<td><strong>PTE (ACADEMIC)</strong></td>
<td><strong>ENGLISH FOR ACADEMIC SUCCESS</strong></td>
</tr>
<tr>
<td>90 overall, writing: 25, speaking: 25</td>
<td>6.5 overall, 6.5 writing, 6.5 speaking, 6.0 reading, 6.0 listening</td>
<td>85 overall, 80 per section. For co-op programs: 3 speaking</td>
<td>70 overall, 60 per band, 70 speaking</td>
<td>63 overall, 65 writing, 65 speaking</td>
<td>75% overall in 400 levels, 75% academic, 75% oral, 75% writing</td>
</tr>
</tbody>
</table>

### Q&A

**WHAT'S AN ADMISSION INFORMATION FORM (AIF)?**

The AIF lets you tell us about your extracurricular activities, explain extenuating circumstances which may have affected your grades, and brag a little about how great you are! We often use the AIF in addition to your grades to make admission decisions. For many programs an AIF is required, and we recommend all applicants submit an AIF.

**WHAT IF MY ENGLISH LANGUAGE TEST SCORES ARE TOO LOW?**

If you’re academically admissible but don’t quite meet our English language requirements, you may be offered conditional admission through Waterloo’s English Language for Academic Studies (ELAS) or Bridge to Academic Success in English (BASE). Learn more about these programs on page 17.

**WILL MY AP OR IB COURSES BE CONSIDERED FOR TRANSFER CREDIT?**

Transfer credits will be considered for Advanced Placement (AP) and International Baccalaureate (IB) courses if you’re applying to programs in the Faculties of Applied Health Sciences, Arts, Environment, Mathematics, or Science, or the School of Architecture*.

*Note: Results must be sent directly from the college board or the IBO.*
TUITION AND SCHOLARSHIPS

Hard earned, well spent.

Estimate your total first-year costs using our online budget calculator. Our website also offers detailed information on scholarships and faculty-specific awards. uwaterloo.ca/future/financing

ENTRANCE SCHOLARSHIPS

<table>
<thead>
<tr>
<th>Scholarship Type</th>
<th>Amount</th>
<th>Admission Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merit Scholarship</td>
<td>$1,000</td>
<td>85-89.9% admission average</td>
</tr>
<tr>
<td>President’s Scholarship</td>
<td>$2,000</td>
<td>90-94.9% admission average</td>
</tr>
<tr>
<td>President’s Scholarship of Distinction</td>
<td>up to $5,000**</td>
<td>95%+ admission average</td>
</tr>
<tr>
<td>International Student Entrance Scholarships</td>
<td>$10,000</td>
<td>Awarded based on academic performance, contest or assignment scores, and Admission Information Form submissions</td>
</tr>
</tbody>
</table>

89% of first-year students received an entrance scholarship for fall 2018

TUITION FEES

(FOR TWO ACADEMIC TERMS)

<table>
<thead>
<tr>
<th>Program/Faculty</th>
<th>International Tuition (Study Permit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting and Financial Management, Applied Health Sciences, Arts</td>
<td>$34,200</td>
</tr>
<tr>
<td>Architecture</td>
<td>$51,700</td>
</tr>
<tr>
<td>Biotechnology/Chartered Professional Accountancy</td>
<td>$37,300</td>
</tr>
<tr>
<td>Business Administration (Laurier) and Mathematics (Waterloo) Double Degree</td>
<td>$39,700</td>
</tr>
<tr>
<td>Computer Science, Business Administration (Laurier) and Computer Science (Waterloo) Double Degree</td>
<td>$53,400</td>
</tr>
<tr>
<td>Computing and Financial Management*</td>
<td>$39,800</td>
</tr>
<tr>
<td>Engineering, Software Engineering</td>
<td>$54,700</td>
</tr>
<tr>
<td>Environment</td>
<td>$34,400</td>
</tr>
<tr>
<td>Global Business and Digital Arts</td>
<td>$38,000</td>
</tr>
<tr>
<td>Mathematics, Mathematics/Financial Analysis and Risk Management</td>
<td>$37,000</td>
</tr>
<tr>
<td>Mathematics/Chartered Professional Accountancy</td>
<td>$38,300</td>
</tr>
<tr>
<td>Science</td>
<td>$35,800</td>
</tr>
</tbody>
</table>

Notes: Amounts listed include incidental fees. Co-op fee of $729/term also applies. See the website for details. *Tuition is significantly higher in your upper years. **$2,000 awarded in year one, plus up to $3,000 in upper years.

EARN WHILE YOU LEARN

Co-op students earn an average of $10,500 in their first work term. These co-op earnings can go a long way to helping pay tuition fees and living expenses. Alternatively, you may choose to work part-time on your study visa*. Our provincial minimum wage is $14 per hour.

*Exceptions apply. Visa details are available at www.canada.ca. Co-op students must have a work permit.

LIVING EXPENSES

( FOR TWO ACADEMIC TERMS)

| Residence | From $5,879 (traditional-style) to $7,823 (suite-style). |
| Meal Plan | From $4,904 (lite) to $5,704 (hearty). |
| Personal Expenses | $3,320 on average ($415/month). Expenses may include phone, laundry, and entertainment; depends on your lifestyle. |
| Books and Supplies | Most programs estimate $2,288 ($4,100 for Architecture students). |
OUR CAMPUS

Chart your path.

Getting to class is a walk in the park on our pedestrian-friendly campus. Enjoy gardens, patios, and creekside benches in the summer, or dart through tunnels and overpasses in the winter. No building on campus is ever more than a 20-minute walk away.

ACKNOWLEDGEMENT OF TRADITIONAL TERRITORY

We acknowledge that the University of Waterloo is located on the traditional territory of the Neutral, Anishnaabeg, and Haudenosaunee people. The University is situated on the Haldimand Tract, the land promised to the Six Nations that includes 10 kilometres on each side of the Grand River.

VISIT US

Guided campus tours are available Monday through Saturday (with some exceptions). Tour bookings are available on our website.

uwaterloo.ca/future/visit

FALL OPEN HOUSE
NOVEMBER 2, 2019

MARCH BREAK OPEN HOUSE
MARCH 21, 2020

BUILDING LEGEND

- STUDENT SERVICES
- RES RESIDENCES
- UC UNIVERSITY COLLEGES
- AHS APPLIED HEALTH SCIENCES
- ARTS ARTS
- ENG ENGINEERING
- ENV ENVIRONMENT
- MATHEMATICS
- SCI SCIENCE

3 satellite campuses in Cambridge, Kitchener, and Stratford

#9 in the world for sustainable cities and communities (THE University Impact Rankings, 2019)
IMPORTANT CONTACTS

GENERAL QUESTIONS
519-888-4567, ext. 43614
askus@uwaterloo.ca

APPLICATION QUESTIONS
myapplication@uwaterloo.ca

PROGRAM-RELATED QUESTIONS
Faculty of Applied Health Sciences
ahsinfo@uwaterloo.ca

Faculty of Arts
arts@uwaterloo.ca

Faculty of Engineering
enginfo@uwaterloo.ca

Faculty of Environment
envinfo@uwaterloo.ca

Faculty of Mathematics
mathinfo@uwaterloo.ca

Faculty of Science
science@uwaterloo.ca

OTHER WATERLOO CONTACTS
APPLICATION CHECKLIST

Your guide to full-time undergraduate studies at Waterloo.

uwaterloo.ca/future/apply

1. ORDER BROCHURES.
Download detailed information about one or more programs.
uwaterloo.ca/future/order

2. APPLY ONLINE.
Apply to Waterloo and our University Colleges (Renison and St. Jerome's) through the Ontario Universities' Application Centre.
ouac.on.ca

3. LOG IN TO QUEST.
Quest is our student information system. We'll email you details about getting started. Add myapplication@uwaterloo.ca and askus@uwaterloo.ca to your contacts so you don’t miss our emails!

4. SEND US YOUR DOCUMENTS.
In addition to your official transcripts, we may require other documentation (e.g., proof of English-language instruction).

5. COMPLETE YOUR ADMISSION INFORMATION FORM (AIF).
Some programs require an interview, portfolio, or other elements in addition to your AIF. Check the admission charts for details.

6. WAIT TO HEAR FROM US.
To help pass the time, check out our residences, clubs, and support services. Once you accept your offer, you’ll be welcomed by our Warrior community!