CHALLENGE yourself

Ottawa, Canada
admissions.carleton.ca

Carleton University
Sign up for Carleton360 to receive customized content that suits your interests and shows you what your future at Carleton can look like. You will receive tailored information on our dynamic degree programs, vibrant student life and the opportunities that await you.

Begin your journey at 360.carleton.ca.
Challenge yourself

Our world is changing and we must be ready to change with it.

At Carleton University, we embrace purposeful change and empower the next generation to drive real impact in the world. We challenge you to be better than you were before — to work hard, explore opportunities and learn new things. To challenge what you thought you knew. To challenge intention without action. To challenge simply doing things the way they’ve always been done.

By coming together as a connected community and harnessing the power of higher education, we can make an impact on a local, national and global scale.

We do this by leveraging what makes us unique:

**We are** a dynamic and innovative university with a wide range of academic programs and a strong commitment to teaching, learning and research.

**We know** that by challenging students to realize their academic, personal and professional potential, we are helping to shape a more promising future.

And **we’re proud** to have equipped over 169,000 alumni with the knowledge and practical skills to make their marks on the world.

We hope you’ll join us in challenging today to build a better tomorrow.

Carleton University acknowledges the location of its campus on the traditional, unceded territories of the Algonquin nation.
Ben Hooker gained experience working for an MP on Parliament Hill while pursuing his studies in Carleton’s Bachelor of Public Affairs and Policy Management.

Carleton’s Industrial Applications Internship Option gives students like Gina Bak the unique opportunity to be a full-time Bachelor of Computer Science (BCS) student and a paid employee of Shopify, a multinational e-commerce company headquartered in Ottawa.

Experience Carleton

We are proud to have built a strong reputation of being a compassionate, connected and caring community. Our students, faculty and staff are united in driving real change for a brighter, more inclusive and sustainable tomorrow.

We have the capital advantage
Conveniently located in Ottawa, the nation’s capital, we offer opportunities you won’t find anywhere else.

Ottawa is home to an unparalleled number of national organizations and museums, federal government agencies, NGOs, and more than 130 embassies and high commissions from around the world. We’re located in one of the world’s top sites for research and development with over 1,900 technology companies in the region. We’re also one of the most beautiful capitals in the world, with sprawling green spaces, winding waterways and architectural and historical landmarks for you to explore.

We are hands-on
Challenge your thinking and gain the skills you need to succeed both in and out of the classroom.

Through experiential learning, you will apply your knowledge and skills to real-world situations and gain relevant experiences. We will help shape your career and academic goals and give you the skills and knowledge so you can achieve them.

We are career-focused
Our programs are designed to start building your career readiness in first year.

We know how important it is to prepare you today for the job market of tomorrow. We take a forward-thinking, holistic approach to career readiness that includes skill and knowledge development, hands-on experiences and meaningful networking opportunities within the capital region and beyond.

By offering opportunities to participate in research, work-integrated learning, skill development, knowledge exchange and entrepreneurship, we are preparing the next generation to shape tomorrow.

We have a global perspective
We all want to make the world a better place—but how? We believe that global prosperity can be achieved by building sustainable communities and that the link between the global and the local is at the heart of what we do.

Carleton is known as a Canadian university of choice for international students and for encouraging all students to think globally. On campus, you’ll study with student peers from over 150 different countries. Given that the education of global citizens requires exposure to international experiences, we also offer many opportunities for students to study abroad.

Carleton is proud to have forged strong connections with a range of organizations to provide research, work placement and networking opportunities for students. You can participate in community service learning with local and international partners, gain work experience through co-op, internship and practicum placements, conduct research alongside award-winning professors, and more.

Carleton’s Industrial Applications Internship Option gives students like Gina Bak the unique opportunity to be a full-time Bachelor of Computer Science (BCS) student and a paid employee of Shopify, a multinational e-commerce company headquartered in Ottawa.
Become a Raven

Over 31,000 STUDENTS

24/7 access to FREE MENTAL HEALTH COUNSELLING though the Empower Me program

#3 in Canada for comprehensive STUDENT SATISFACTION*

TOP 3 BEST PLACES TO LIVE in Canada***
Over $28M in SCHOLARSHIPS and bursaries awarded in 2020-21

#1 MOST ACCESSIBLE university in Canada for students with disabilities

$86M in internal and external RESEARCH FUNDING (2018-19)

8 Carleton THERAPY DOGS

TOP 5 for COMPREHENSIVE UNIVERSITIES in Canada*

CO-OP options available in OVER 100 PROGRAMS

2nd MOST SUSTAINABLE UNIVERSITY in CANADA**

*Maclean’s University Rankings 2020; **UI Green Metric University Rankings 2020; ***Maclean’s Best Communities Ranking 2019
At Carleton, equity, diversity and inclusion (EDI) is fundamental to our vision of excellence, community and holistic wellness. As a diverse community, it is essential to integrate EDI into our core activities and academic mission to ensure everyone can achieve their full potential.

We know that EDI is not just about doing the right thing. Bringing together different perspectives and experiences unlocks creativity that leads to positive outcomes for all. Achieving this means committing to enhancing student supports and reimagining curricular and pedagogical practices, research infrastructure, and leadership development for organizational, academic and non-academic staff.

Our commitment to leadership in the areas of human rights and EDI is outlined in the comprehensive Equity, Diversity and Inclusion Action Plan, launched in 2021 following a robust consultative process.

Facilitated through the Department of Equity and Inclusive Communities (EIC), this strategic document outlines the essential actions that will guide the university in our commitment to offer safe, equitable and inclusive spaces for our students, staff and faculty. In light of the current environment of global pandemic upheaval, transitions to virtual operations, economic contraction and social justice movements that highlight societal disparities, we are ever more committed to our EDI mission.

Visit carleton.ca/equity for more information about EIC at Carleton. The comprehensive EDI document can be found at carleton.ca/edi-plan.
Carleton is committed to true reconciliation with Indigenous peoples. Together, we are forging a new path forward, shifting our institutional culture and current leadership approaches to break from privileged colonial pedagogies and Western intellectual frameworks.

Carleton strives to be a leader in supporting Indigenous students, staff and faculty. Carleton’s Centre for Indigenous Initiatives (CII) provides safe spaces for dialogue and learning. We do this by nurturing a sense of belonging and by developing and delivering resources and training to educate the Carleton community about the experiences, histories and worldviews of Indigenous peoples. More information about Carleton’s CII can be found at carleton.ca/indigenous.

In October 2018, the Carleton University Strategic Indigenous Initiatives Committee (CUSIIC) was formed to invigorate Carleton’s Indigenous Strategy and revitalize relationships with Indigenous communities in Algonquin territory. Through an extensive engagement process, the committee gained insight into how Carleton could work toward enhancing supports for Indigenous students, increase the incorporation of Indigenous knowledge transitions in teaching and learning practices, and improve community engagement.

The result of this process was the committee’s final report, entitled Kinàmàgawin: Learning Together, containing 41 Carleton-specific calls to action. This report addresses timely topics relevant to Indigenous peoples, and as an institution, we look forward to a more equitable and promising future.
Second-year students in Carleton’s BAS Design get hands-on instruction while at work in first-rate studios.
Carleton’s Bachelor of Architectural Studies program prepares you for professional studies at the master’s level and for careers across a wide range of exciting professions. Our program builds on a long history in creative thinking and making, and our longstanding focus is to improve the buildings and communities we inhabit. Looking forward, we will continue to use advanced drawing (digital), modelling and fabrication as critical tools to understand and improve the urgent social, political and environmental issues that define our place and time.

**Program of study**

Carleton’s Azrieli School of Architecture and Urbanism awards a pre-professional Bachelor of Architectural Studies (BAS) degree with majors in Design, Urbanism, and Conservation and Sustainability. If you intend to practice architecture, you can continue your studies by applying to our accredited, professional Master of Architecture program or an equivalent program at another institution. With its focus on project-oriented design studios — supported by courses in drawing, multimedia applications, building technologies, construction, history and theory — the BAS degree provides an excellent foundation for a range of design-related careers and graduate programs.

The three, inter-related BAS majors are:

- **BAS Design**: architecture at the scale of the building, with a focus on new buildings
- **BAS Urbanism**: the design of the larger built environment, with a focus on blocks, neighbourhoods, cities and regions
- **BAS Conservation and Sustainability**: the conservation and adaptive re-use of existing buildings, which account for over 90% of the built environment

**Excellent facilities**

At Carleton, we are proud to offer the finest facilities in Canada. You can take advantage of:

- design studios with personal workspaces
- professionally staffed fabrication facilities for woodworking, welding, 3D printing, and laser and CNC cutting
- a print shop and digital photography studio
- an assembly room for models and full-scale projects
- a technical library and reading room
- extensive computer labs

**The Carleton advantage**

At Carleton, you will be taught by internationally renowned faculty. Outside the classroom, you have the opportunity to participate in exciting research projects and study experiences including co-op and trips abroad. We have an international exchange program that allows you to study for one term at universities in cities like Liverpool, Madrid, Paris, Melbourne, and Durban, South Africa.

The Carleton Immersive Media Studio (CIMS) is a leading research centre for advanced studies in modelling and visualization using immersive, digital and hybrid media.

The Carleton Urban Research Lab (C-URL) promotes design thinking, seeking ways to expand research, teaching and engagement around the lab’s three central themes — water, cities and equity.

The Carleton Sensory Architecture and Liminal Technologies Laboratory (CSALT) explores architectural materiality and materials with a focus on innovative uses of traditional and emerging building materials and fabrication concepts.

Workshop courses on topics such as furniture design, digital fabrication, stage design, building information modelling (BIM), advanced structures and community development are offered throughout the year.

The Forum Lecture Series exposes students to internationally acclaimed architects and designers speaking on a variety of topics.

**The capital advantage**

Located in the heart of the nation’s capital, Carleton offers unique contact with organizations such as:

- Canada Mortgage and Housing Corporation
- Canadian Museum of History
- Canada Science and Technology Museum
- Library and Archives Canada
- National Capital Commission
- National Gallery of Canada
- National Research Council Canada

**Career paths**

- architecture
- art design in the television and film industries
- conservation architect, heritage preservation
- consulting in sustainable design
- fields related to the Architecture, Engineering and Construction (AEC) sector
- furniture, graphic and multimedia design
- policy
- theatre stage design
- urban design and city planning
Carleton’s Bachelor of Arts (BA) programs are designed with the understanding that how you learn is every bit as important as what you learn. We have a wide range of undergraduate programs that aim to inspire, challenge and empower you to participate in and help shape our ever-changing world.

**Program of study**
At Carleton, you can structure your BA according to what you want to achieve. You can choose a minor subject to complement your major subject and you can, in certain cases, pursue a concentration or a specialization—a set of courses in your major directed toward an area of expertise. If you are interested in two fields of study, you may be able to pursue them both in a combined program.

**First-year Seminars**
Our First-year Seminars (FYSMs) allow you to strengthen your critical-thinking skills through discussion and debate with both your professor and your peers. FYSMs consists of small classes of around 30 students, and you can choose from a large selection of seminars.

carleton.ca/first-year-seminars

**Finding your way**
Not sure what you want to study? You’re not alone—we’re here to help you find your way. You can take time to explore your academic options by not selecting a major for your first year. You can choose from a wide variety of courses and get academic advice on possible majors and careers. Once you’ve discovered first-hand what Carleton has to offer, you’ll be in a better position to decide your future path.

**African Studies**
Africa is the most culturally and geographically diverse continent on Earth. The African Studies program offers you an opportunity to study the histories, cultures, languages, geographies, politics and economics of this fascinating continent. You will also learn about the aid, trade and investment, arts and culture and migration flows that link Africa to the rest of the world in the era of globalization.

Students in the Combined Honours program can benefit from a work placement opportunity, a mentorship program and the chance to study in Africa through our African Studies Abroad course or by doing their third year at one of the African universities with which Carleton has exchange agreements. Our students also benefit from our wide partnerships in Ottawa: government agencies and departments, African diplomatic missions, NGOs and other international organizations.

**Career paths:** advocacy; community organizing; consultancies; counselling and mediation; education; environment; immigration services; international development; journalism; marketing and advertising; museology; personnel services; public health; public policy development; research; urban planning; user-experience research

**Applied Linguistics and Discourse Studies**
Language is an essential part of what it is to be human. This program gives you the opportunity to examine how language works in real life. In the Applied Linguistics and Discourse Studies program you will develop and apply theories to solve everyday problems involving language. Courses address such questions as how languages are taught and learned, how language skills are evaluated, how writing is used to perform a variety of functions, how language is used in specific social contexts, how language can influence society and vice versa, how government policies influence language practices and what makes a bilingual education program effective.

Minor programs in American Sign Language, Mandarin Chinese, German, Italian, Japanese, Korean, Russian, Spanish and Linguistics are also available.

**Career paths:** curriculum design; language teaching and testing; language-related high-tech industry; policy analysis; speech-language pathology; teaching; translation; writing and editing

**Art History**
Examining how art was understood, made, used and experienced opens windows into every aspect of the societies we study. As an Art History student, you will gain the historical and methodological frameworks that will allow you to interpret a wide range of imagery in different ways. An Art History BA provides you with invaluable skills applicable to a wide range of professions. These skills include oral and written communication; the identification, critical assessment and analysis of research materials; creative problem solving; critical thinking; visual and verbal communication technologies and techniques; and the ability to work independently and in groups. As the world becomes more image-centric, this visual literacy will only become more valuable.

Art History is also committed to experiential learning. Students in third or fourth year can take advantage of our practicum program, where they get real-world experience working in art galleries and other cultural institutions, such as the...
National Gallery of Canada, Library and Archives Canada, the Ottawa Art Gallery, the Canadian War Museum and the Canada Council Art Bank. Regular field trips and study abroad opportunities are also part of this commitment.

**Career paths:** archival work; art collection management; art consultation; art restoration and conservation; arts administration and programming; arts education; arts journalism; digital humanities; freelance curating; multimedia work; museum or gallery work

**Biology**

Biology in the twenty-first century is among the most diverse and exciting of the sciences. Many of the challenges we face as a society, from environmental decline to the demand for new health therapies, involve biological solutions. As a Carleton Biology student in the BA, you will gain broad experience through core science courses and courses in the arts and social sciences that suit your individual interests and needs. The Department of Biology offers BA and Bachelor of Science degrees, and an interdisciplinary Bachelor of Humanities degree offered jointly with the College of the Humanities.

**Career paths:** bioethics; education; environmental consulting; fieldwork in agriculture or wildlife management; intellectual property; medicine; natural resource management; research; science policy and regulation; science writing

**Canadian Studies**

The study of Canada is about the politics, culture, society, history and geography of a space that is many things. Canada is a nation-state; it is the ancestral homeland of Indigenous peoples; it is a place of arrival and re-rooting and it is a set of diverse regions and competing projects. In this program, you’ll learn to think about Canada from different angles and in the process, you will become adept at combining the methods and perspectives of different disciplines.

The program equips you to participate in addressing urgent and longstanding problems in Canada. Some of the issues that you’ll tackle include relationships between settlers and Indigenous peoples; processes of colonialism, decolonization, and reconciliation; challenges of identifying and preserving heritage; tensions between urban and rural Canada; conflicts over land and natural resources; Canada’s history and present of systemic racism; Canadian national identity and multiculturalism, social movements; attempts to define and produce Canadian culture and Canada’s participation in the world.

**Career paths:** communications; journalism; law; museum and archival work; policy; public service; teaching; work with community organizations and NGOs

**Childhood and Youth Studies**

Professionals working with children and youth face many challenges involving complex relationships with families, communities and governments. The newly redesigned Childhood and Youth Studies program at Carleton will provide a critical interdisciplinary educational experience to prepare you for a wide range of careers in this important and expanding sector. Your coursework will introduce you to the complex contexts of childhood and adolescence throughout history, equip you with the analytic skills necessary to work effectively with children and youth, and inspire your commitment to the welfare of children and youth in Canada and across the world. The flexibility to pursue a minor in another discipline will also enable you to customize your program of study to your specific career interests.

**Career paths:** child advocacy; education services; health and social services; policy development; research in public and private agencies; senior administration
Criminology and Criminal Justice
Our students acquire a comprehensive and interdisciplinary understanding of crime, criminality, and processes of criminalization and punishment. You will learn about penal and transformative justice, practices of criminalization, surveillance, prevention, policing, courts, sentencing and corrections. You will personalize your program by choosing one of three concentrations: Law, Psychology or Sociology. In addition, possible field placements in organizations such as the Crown Attorney’s Office, criminal law offices or social justice organizations will give you hands-on experience in real-life situations, including front-line work with criminalized individuals, victims and survivors of violence, lawyers and non-governmental organizations. Other placements can match you with researchers and policy analysts involved in criminal justice, transformative justice and crime prevention. Carleton’s location in Ottawa gives you research and employment opportunities at grassroots, provincial and federal justice-oriented organizations and agencies.

Career paths: corrections, crime prevention analysis; government and policy; graduate work or professional studies; harm reduction and support services; legal and social policy research; probation and parole; security and law enforcement

English
As human beings, we understand ourselves and our world through the stories we tell. In the English department, we approach stories as tools for self-reflection and self-understanding, creative thinking and problem-solving. Our students learn to think deeply and write clearly in small, supportive and inclusive classes taught by award-winning professors. Our students are prepared for living in a complex world by studying the texts that anchor our diverse histories, from Beowulf to Bollywood, Jane Austen novels to comic books and Shakespearean plays to Indigenous drama.

Our highly successful co-op program enables students to combine academic study with valuable, paid work experience. Students have the opportunity to study abroad and register for a range of concentrations and minors in Creative Writing, Drama Studies and Professional Writing. Our department offers a wide range of courses taught by internationally recognized scholars. Studying in the nation’s capital, our co-op students frequently find employment with the federal government and in Ottawa’s high-tech sector. Our students enjoy access to prominent national institutions, including Library and Archives Canada, the National Gallery of Canada and the National Arts Centre. In addition, students benefit from the recently acquired Carleton Dominion-Chalmers Centre, which is currently being renovated to become a downtown performing arts centre. Ottawa’s vibrant literary community hosts many events, from prestigious national galas to coffeehouse writer circles. Our students can also attend many of the Ottawa International Writers Festival events for free.

Career paths: civil service; communications; creative writing; editing; human resources; law; library sciences; market research; non-profit sector; public relations; publishing; social media; teaching; technical and professional writing

Environmental Studies
Explore environmental change, governance and policy in Canada and globally. Environmental Studies offers an interdisciplinary program of study focusing on the application of knowledge and hands-on learning of pressing environmental issues. Environmental Studies prepares students to be informed thinkers and problem-solvers dealing with the environmental challenges critical to our future. Through a combination of required courses and electives, students gain a solid foundation in environmental studies, while also being able to pursue specific areas of interest, such as resource conservation, environmental justice, urban sustainability or environmental policy. Environmental Studies also allows students to select from a diverse range of courses in anthropology, biology, earth sciences, economics, geography, geomatics, history, Indigenous studies, law and legal studies, philosophy, political science and sociology. Field courses, workplace practicums and experiential learning provide opportunities for students to gain valuable research skills and practical experience during the completion of the program.

Career paths: climate change organizer; conservation policy analysis; ecotourism; environmental assessment; environmental consulting; environmental planner; natural resources analysis

European and Russian Studies
The Institute of European, Russian and Eurasian Studies (EURUS) offers a comprehensive, interdisciplinary approach to the study of Europe, Russia and Eurasia. You will be able to build a program according to your specific interests, combining subjects such as history, politics, economics, language and culture. You will examine issues such as international security, nationalism and ethnic conflict, crime and corruption, the effects of globalization, migration and multiculturalism, environmental and social policy, democratization and civil society, collective memory and national identity, market reform, and European integration. In your third or fourth year, you may choose to take part in an academic exchange in a European country, in Russia and/or to pursue co-op employment. In addition to the core academic program, the Institute hosts a number of special lectures by high-profile experts, foreign visitors and embassy personnel throughout the year. An internship program is available to qualified fourth-year students.

Career paths: consulting; foreign and government service; law; media and business; non-governmental and international organizations; research

Film Studies
Explore the world of film and media. This globally-focused and interdisciplinary program teaches critical, theoretical and historical approaches to film and emerging cinematic media like video games and virtual reality.

“In the Canadian Studies program, I learned and frequently practiced academic skills such as reading, writing, and how to prepare and deliver an oral presentation. I appreciated that the courses were smaller as it allowed me to participate more frequently and get one-on-one help whenever needed. I made friends with my peers and professors right off the bat and remain close with them to this day. ”

Hanna Stewart, student in Canadian Studies
Our program is student-friendly, with small classes taught by internationally recognized experts with a commitment to mentorship. Students learn to think analytically and express themselves clearly while developing specialized knowledge about the history and aesthetics of film as a social and cultural practice.

Take classes in film genres like horror, sci-fi, melodrama, film theory, the cinemas of Asia, Africa and Scandinavia, Indigenous cinema, video games, gender and sexuality in media, film festivals, film music, documentary, sound studies and queer and transgender cinema. Students in their fourth year can get credit for internships with local production companies, film festivals, and museums or archives, such as the Canadian Film Institute, SAW Video, Ottawa International Animation Festival, Inside Out Ottawa LGBT Film Festival and Digi60 Filmmakers’ Festival.

Career paths: advertising and multimedia production; curation, preservation, and archiving; entertainment law; festival programming; film criticism; filmmaking; museum administration; screenwriting

French
Carleton’s Department of French is a great place to learn French and explore the literature, linguistics and cultures of the francophone world. Whether you wish to major in French, expand your BA with a minor in French, or enrol in a single course, we have courses for you. Our program spans beginner to advanced levels, helping students develop greater competency in reading, writing, listening, speaking and interacting in French. You can engage academically with topics ranging from the status and features of French dialects worldwide to emerging voices in Quebec literature, to writers from Africa and the Caribbean. Exchange opportunities and co-op work placements are available to students majoring in French.

Career paths: business; foreign and government service; public relations; publishing; teaching; tourism; translation and interpretation

Geography
Geographers seek to understand the complexity of the human-environment interactions that shape everyday lives, places, communities and global issues. Learn about and apply geographic approaches, including a focus on spatial analysis, to explore climate change, environmental degradation, globalization, urban inequality, local food systems, colonialism and spatial (in)justice. The program offers a solid foundation in geographic knowledge and research skills, while also allowing for the in-depth examination of specific topics of interest to students. Field courses, work placements, experiential learning and hands-on training in tools like geographic information systems (GIS) provide opportunities for students to gain practical skills and experience while completing the program. Specialized concentrations in Physical Geography and Urban Geography are available. A Bachelor of Science in Physical Geography is also available.

Career paths: city and regional planning; conservation analysis; environmental activism or education; natural resources management; policy analysis; sustainability research and advocacy

Geomatics
Geomatics deals with the acquisition, management, analysis and display of geographic information for societal and environmental problem-solving. In our Geomatics BA program, you will obtain intensive training in geographic information systems (GIS), remote sensing (imaging from satellites and aircraft) and cartography, including desktop, web-based and mobile applications. You will apply Geomatics tools and techniques to understand social and environmental issues and

Students interested in learning about First Nations, Inuit, and Métis peoples will find many opportunities at Carleton. A significant number of our BA programs, from Art History to Political Science, offer courses or course content addressing Indigenous issues. Carleton also offers a Combined Honours program in Indigenous Studies. Ojigkwong, Carleton’s Indigenous centre (pictured above with Professor Kahente Horn-Miller), is open to the campus community to learn about and practice First Nations, Inuit and Métis cultures, traditions and worldview. Ojigkwong, meaning “Morning Star” in Algonquin, is a hub for student activities throughout the year.
environmental systems, addressing complex problems and planning human interventions. Some examples of Geomatics application areas include urban planning and transportation analysis (infrastructure management, socio-economic mapping, business analysis and sustainability planning), ecosystem and environmental resource management (e.g. forestry, agriculture, water resources) and public health and security (e.g. hazard mapping, disease spread, crime analysis). Tools of the trade include specialized computer software (e.g. Google Earth, ESRI ArcGIS software, open-source GIS and database management systems) and hardware (GIS workstations, GPS technology, camera systems, drones, smartphones and other mobile platforms). Our program combines hands-on learning using the latest in laboratory facilities with opportunities to gain field experience and do work placements. A Bachelor of Science in Geomatics is also available.

Career paths: environmental impact assessment; GIS analysis and consulting; map design and publishing; remote sensing and image analysis; resource management; urban planning

Greek and Roman Studies
Greek and Roman Studies (Classics) provides an excellent opportunity to learn about the ancient roots of civilization and to observe the impact that the ancient world had on later eras. The program examines the literature, language, history, philosophy, mythology, religion, social and economic life, technology, art, architecture and archaeology of the ancient world, framed by the impact on the Mediterranean basin of the city-states of Greece and the Roman Republic and Empire. In addition to learning about the history of civilizations that have made an indelible impact on the modern world, you will have the opportunity to learn the ancient Greek and Latin languages, to study ancient literature in the original languages or in translation, and to benefit from the expertise of Carleton scholars who have a rich variety of interests and areas of specialty. The program is intrinsically interdisciplinary: the study of Classics provides a well-rounded education, producing graduates who can reason, argue and communicate—essential skills for any field. A minor in Archaeology is also available.

Career paths: archaeology; archival research; business; law; museology; public service; teaching and academia

History
History allows us to understand the complex forces that have shaped our world. Whether studying war or revolution, the Americas or Africa, sport or sexuality, history helps us decipher the contemporary world and understand our place in it. At Carleton, we are committed to studying the past in innovative ways. In your courses, you might record a podcast, prepare a briefing note, design a historical game, digitize a medieval manuscript, write a piece of historical fiction, craft an essay or do research for a government agency. You will exchange and debate ideas, find and assess evidence, and sharpen your research, writing, and communication skills.

Students can gain work experience through co-op and practicum placements in a museum or government agency. In the Public History concentration, Honours students explore how history appears in our everyday lives, not just in museums and monuments, but also in movies, reality television, video games, music and the stories families and communities pass from one generation to the next.

Career paths: education; foreign service; government; historical research; information management; law; library and archival services; media; museums; non-governmental organizations; public relations

History and Theory of Architecture
This program explores how our built environment reflects human needs and ideas throughout history. Students learn to ‘read’ buildings as dynamic documents that interact with all aspects of human life. As well as offering a rich variety of courses, the program organizes regular field trips, invites guest speakers from outside the university and creates study abroad opportunities in locations such as Venice, Rome and England. Our unique practicum program gives students academic credit for working in organizations like Parks Canada and the Society for the Study of Architecture in Canada, or firms like PR-TY Architects.

It all adds up to an exciting education that opens many doors. History and Theory of Architecture is an excellent first step toward careers in heritage conservation, planning, architectural criticism or architectural practice. It fosters intellectual skills that are invaluable in any profession in which critical thinking and communication skills are important. Our unique program also enables you to meet and learn with people who share your passion for architecture.

Career paths: academic research; architecture; governmental heritage management; heritage consulting and preservation; journalism and criticism; planning; teaching

Human Rights and Social Justice
Carleton’s Human Rights and Social Justice program provides students with a critical examination of historical and contemporary human rights issues from an interdisciplinary perspective. The program is structured around five key thematic areas: 1) a critical analysis of the concepts and principles underlying human rights traditions; 2) a study of the laws and institutions that support and implement human rights frameworks; 3) an analysis of political repression from a human rights perspective; 4) an examination of social marginalization.
and the role of human rights in the protection of marginalized groups; and 5) an exploration of the relationship between human rights and social justice. Our location in Ottawa will give you access to local, national and international organizations that deal with the promotion of human rights and the elimination of human rights abuses. The city and the university also play host to national and international visitors who offer insights into human rights activism.

**Career paths:** advocacy work; government service; international relations; law; non-governmental organizations

**Indigenous Studies**
How does the land, Indigenous languages and kinship shape human and more-than-human relations? How are Indigenous peoples fighting the climate crisis? How can we explain the conflicts we see around land and rights, especially in an age declared to be about (re)conciliation? Why is it important to transform Indigenous-settler relations? These are some of the many questions you will pursue as a student in Indigenous Studies, a program that centres Indigenous worldviews in our research, teaching and mentoring. While Critical Indigenous Studies is a diverse field of study and engagement, we are unified by our commitment to Indigenous resurgence and ways of knowing, community-engaged learning and dissection of colonial power and politics. You will take courses that discuss Indigenous feminisms, genders, and sexualities, ecological ways of knowing, Indigenous urbanisms, Indigenous legal orders, historical and contemporary Indigenous political struggles, Indigenous arts and culture, Indigenous languages and their relationships to the land, and global Indigeneity, among others. With a degree in Indigenous Studies, you will be prepared to participate knowledgeably in urgent agendas of change: decolonization, climate action, Indigenous cultural and political resurgence, anti-racist education, grassroots capacity-building, law and policy reform and revising public narratives of Canada and beyond.

**Career paths:** advocacy; community sector; creative industries; journalism; law; museum and archival work; public service; teaching

**Law**
The Department of Law and Legal Studies at Carleton is home to the oldest and largest BA program in law in Canada. In the program, you will acquire a strong understanding of the dynamics and operation of law in the context of social, economic, cultural and political structures. You will study the rules, agents, institutions and power relationships that underlie the law, while developing skills in legal research, interdisciplinary methodologies and theoretical analysis. You will be taught by award-winning professors and extensively published researchers. Carleton’s proximity to national public institutions and NGOs, such as the Supreme Court of Canada, Parliament, UNHCR and the Consumer’s Association of Canada, provide unique work and volunteer opportunities for our students. Honours students have the choice of a concentration in Business Law; Law, Policy and Government; or Transnational Law and Human Rights. Co-op options are available for qualified students in Business Law and in Law, Policy and Government. Students can also enrol in a service-learning placement course and receive course credit while obtaining real-world experience working with a company, organization or community group on legally related issues. Qualified students have the option to study abroad in exchange programs around the world.

**Career paths:** advocacy; banking and investment; business management; criminal justice; education; law and legal practice; legal administration; legal research; policing and law enforcement; policy analysis; public relations; public service; social policy

**Linguistics**
Linguistics is the scientific study of one of the most fundamental aspects of being human: using language to communicate. Linguists explore a range of fascinating ideas including what it means to know a language; how we
process and produce language; language structure; how children acquire language; variation and diversity in languages across the globe; language disorders and delays; and how languages change over time.

At Carleton, students learn to study linguistics from a dedicated faculty with a diverse set of research interests, including theoretical and experimental approaches and methods. Students can choose from two concentrations to tailor their degree to their interests: Linguistic Theory or Psycholinguistics and Communication Disorders. Qualified students in the Psycholinguistics and Communication Disorders concentration have the opportunity to take a practicum course that provides clinical experience in speech-language pathology.

A Bachelor of Science in Linguistics is also available.

**Career paths:** artificial intelligence; branding and advertising; forensic linguistics; language documentation; language processing; language revitalization; speech-language pathology; translation and interpretation

**Music**
Our Bachelor of Arts program in Music focuses on music as a historical and social phenomenon. Carleton BA Music students also have the option to study composition, music theory, community music, computer music, Indigenous studies, gender studies, improvisation and disability studies. In our program, you will be able to study a wide variety of musical styles and traditions, including Western classical music, Canadian music, music of the world, jazz and popular music.

BA Music students form a close-knit community and receive personalized attention from highly qualified faculty who are internationally distinguished and recognized for their achievements in teaching and research. There is no audition or performance requirement for this degree. For students interested in pursuing performance, a Bachelor of Music is also available.

**Career paths:** arts management and administration; civil service; composition; entertainment industry; law; library and archival work; music criticism; musicology; performance; radio and television work; teaching music in private and public environments

**Philosophy**
The study of philosophy prepares you to engage meaningfully in whatever profession you choose, because it develops your ability to assess ideas, think clearly and creatively, and appreciate multiple perspectives on matters of the deepest importance. By studying philosophy in one of our programs, you will have the opportunity to develop these abilities in a wide range of exciting courses from faculty members who are as passionate about their teaching as they are about their internationally recognized research. You will also be following in the footsteps of several notable public figures who have studied philosophy at Carleton. Graduates often pursue academic careers after completing advanced study, or pursue rewarding careers in law and government, policy analysis, ethics in health care and other fields, and social advocacy with non-governmental organizations.

**Career paths:** advocacy; cognitive science; ethics (medical, business, government and leadership in administration); law; social policy analysis; teaching

**Political Science**
Where better to study politics than in Ottawa, the nation’s capital? Our program offers many opportunities to learn from and work with experts and experienced practitioners in the real world of Canadian and international politics, as well as a diverse faculty of internationally renowned scholars. You will explore new ideas and probe complex issues such as international conflict and cooperation; citizenship, migration and identity; and the contemporary challenges of democratic governance. Our program will guide you through the foundations of the discipline to explore the core fields of political science such as comparative politics, international relations, political philosophy and public policy. Through your academic journey, you’ll hone research, writing and communication skills that are essential for almost any career path you choose to pursue.

In upper years, international or local internships and exchanges are exciting possibilities, as are co-op placements.

**Career paths:** foreign service; government; lobbying and consulting; non-profit sector; politics; polling and research

**Psychology**
Psychologists study the mechanisms that underlie our thoughts, emotions and behaviours. They examine a diverse range of topics, such as how we think and learn, how we interact with others, and how we can promote healthy development and wellness. This is accomplished...
“Choosing to study Psychology at Carleton was the best decision I ever made and a truly invaluable experience. With its variety of concentrations, special topics seminars, peer mentorship program and hands-on learning experiences with community practicums and co-op options, Psychology (BA) is a one-of-a-kind program. Not to mention the phenomenal faculty and staff, research opportunities and great selection of student support services that make for an unparalleled post-secondary journey.”

Chelsea Medland, student in Psychology (BA) with a concentration in Health Psychology

by conducting research so that the knowledge gained can help us to better understand the human mind, enhance well-being and performance, and generate additional research questions.

All of our programs provide opportunities to explore psychology’s major areas within the context of an active and diverse research environment. For students wishing to focus on one of these major areas, we offer concentrations in Cognitive Psychology, Developmental Psychology, Forensic Psychology, Health Psychology, Organizational Psychology and Social/Personality Psychology. As well, we offer a stream in Mental Health and Well-Being. We also offer a minor in Human Resources Management.

The insights you gain from studying psychology will serve you throughout your life, in virtually any career. Psychology is also offered as a Bachelor of Science.

**Career paths:** corrections; early childhood education; health and social services; human resource management; marketing and public relations; mental health services; parole counselling; probation; research

**Religion**

In this program, students will analyze responses to questions about identity, history and the basis of political and ethical commitments that have been posed by the world’s major religions. The study of religion nurtures in students a respect for the complex identities of others, their histories and cultures. You can study the history and literature of Christianity, Islam and Judaism; examine Asian religions such as Buddhism and Hinduism; learn about Indigenous traditions in Canada and worldwide; follow the rise and fall of religious leaders and movements; or explore common themes in a variety of religious traditions, such as the environment, the role of women or death and the afterlife. A degree in Religion will equip you with critical reading, writing, and thinking skills, as well as an understanding of different traditions toward career opportunities in our increasingly multicultural world, where religious beliefs play a significant role in human affairs and continue to affect local and global events.

**Career paths:** archival and museum work; business; correctional services; counselling/conflict resolution; education; foreign service; intercultural communication; international development; law; library services; mediation and peace initiatives; non-governmental organizations; politics; publishing and editing; social work

**Sociology**

How are new technologies changing the ways we interact with each other and live our lives? Why are so many jobs becoming short term, and how is this situation affecting families, communities and self-identities? Why do social problems like poverty, racism, sexism, homophobia and ageism persist in the modern world? What can we do to address these problems?

Sociology is the systematic study of human societies, where everyday events and experiences are shaped by social forces and processes. Sociology explores how families, economic inequalities, sexuality, gender, race, the law and the state shape individuals, and how individuals shape these social institutions and structures. Sociology sheds light on the social processes shaping lives, problems and possibilities in contemporary society. We train you to do hands-on research on topics you care about, and we offer a co-op option.

Our one-of-a-kind stream in Social Justice gives you first-hand experience learning from community leaders and partnering with community-based organizations to do research, work on campaigns, public events and documentary films.

**Career paths:** business and professional work; community service work or non-profit sector; government service; policy analysis and development; research

**Women’s and Gender Studies**

Carleton’s Pauline Jewett Institute of Women’s and Gender Studies offers programs that engage students in critical understandings of feminist scholarship, 2SLGBTQ+ studies, disability studies and critical race studies across different historical, socio-economic, cultural and political contexts. Central to our programs is the consideration of how gender intersects with race, class, ethnicity, age, ability and sexuality within a globalized world and transnational environments. Students can study gender issues in courses that cross disciplines and contribute to activist projects and are encouraged to work intersectionally across all the areas of study we house. Students also have the unique opportunity to participate in a practicum placement with feminist groups, organizations and agencies from inside and outside of the Carleton community.

The institute of Women’s and Gender Studies also offers minors in Critical Race Studies, Disability Studies and Sexuality Studies.

**Career paths:** community service; community-based agencies; counselling; education; government; law; media; social policy research
The BA advantage

Carleton’s Bachelor of Arts (BA) provides students with opportunities to gain transferable skills and work experience, participate in extracurricular and global opportunities, and prepare for the countless career opportunities that await BA graduates.

**Gain practical work experience**
Most BA programs offer work experience through co-operative education or through a practicum, internship or placement. These opportunities allow you to apply your skills in real, on-the-job scenarios, and to graduate with practical work experience and connections to professionals.

Through the co-op program, Sociology student Angela Ingrao completed an eight-month work term at the Royal Canadian Mint. Angela’s job involved pulling reports, analyzing and verifying data, updating training records and helping with administrative tasks.

**Build transferable skills**
Transferable skills allow you to succeed in a job market that is rapidly evolving and needs graduates who are able to adapt and apply their skills to many circumstances. The skills you gain will vary based on your area of study, but all Carleton BA graduates will gain skills in:

- communicating effectively across a variety of mediums;
- thinking critically about local, national and international concerns;
- analyzing, researching and interpreting information;
- building and articulating clear, concise arguments; and
- working independently and in teams.

**Shape your future**
Carleton’s Career Services offers career guidance starting in first year, so you can plan for your future while you build skills and gain experiences. This combination of skills, work experience, extracurricular involvement and career planning allows BA students to take important first steps toward achieving a rewarding career. Our BA graduates are working in a variety of careers, in fields as diverse as:

- archival and museum work
- arts administration
- communications and marketing
- community development
- entertainment
- health and well-being
- human resource management
- law and policy analysis
- public service
- teaching
- writing, editing and publishing

**Get involved**
Extracurricular involvement helps you realize your interests and capabilities, build relationships and expand your perspective. Students can join a club or society, participate in local or international community service-learning, study abroad and more. Participating in these activities will shape how you understand yourself, and how you understand the people and world around you.

Hannah Consitt, a Criminology and Criminal Justice student, studied abroad in the United Kingdom during third year.
Are you interested in how people or computers think? Cognitive scientists study thinking from a variety of different perspectives.

Program of study
Our program’s researchers—students and faculty members—study the mind by combining the methods and theories of five disciplines: neuroscience, computer science, psychology, linguistics and philosophy. This interdisciplinary approach allows unique insights into human understanding, thought, perception, language and emotion. Through Carleton’s program, you can develop your expertise in one of five specializations: Biological Foundations of Cognition; Cognition and Computation; Cognition and Psychology; Language and Linguistics; or Philosophical and Conceptual Issues.

You can also take advantage of a variety of on-campus research facilities, including those associated with the Visualization and Simulation Centre (VSIM), the Language, Logic, and Information Lab (LLI), the Science of Imagination Lab (SOIL), the Language and Brain Lab, the Centre for Applied Cognitive Research (CACR) and the Children’s Representational Development Lab (CRDL).

Honours Thesis
As a senior student, you may have the opportunity to complete a research thesis on a topic in cognitive science. The Honours Thesis allows you to work closely with a faculty supervisor and to develop an area of independent research. You will graduate with valuable research experience, specific skills in identifying and analyzing problems, and a defined area of expertise.

Honours Project
Alternatively, if as a senior student you would like to gain hands-on experience, you can choose to undertake a research project. The Honours Project allows you to enhance skills that prepare you for a future career. You will work in groups of three to six, engaging in a comprehensive investigation of a “big” question in cognitive science, and will contribute by completing an original research project. The project experience provides the opportunity to transform cognitive science students into confident researchers ready for a competitive job market or further education.

Other research opportunities
Research interests of faculty members involved in the Cognitive Science program include a broad range of areas.

As a senior student, you may find yourself assisting in areas of research such as:
- natural language processing
- cognitive engineering
- modelling and simulation of games
- genetic algorithms

Careers
The Bachelor of Cognitive Science provides ideal preparation for careers in:
- cognitive research in universities, government research facilities or private companies;
- website usability design;
- language processing research; or
- speech pathology or occupational therapy (both with further study).

You will also be prepared to continue to master’s programs in Cognitive Science or in the area of your specialization (such as Psychology, Linguistics, Philosophy, Cognitive Neuroscience or Computer Science).
Commerce
sprott.carleton.ca | @sprottschool | Co-op available

Carleton’s Sprott School of Business delivers a transformational business education and many opportunities to engage with organizations on key issues shaping business and communities. Employability skills, an entrepreneurial mindset and a global perspective empower students to achieve career success and have an impact.

Program of study
The Bachelor of Commerce (BCom) program delivers a flexible business education with the choice of eight concentrations and options to add co-op, study abroad and/or a minor in another subject.

Core foundation
In the first two years of the BCom, you will take courses in all key areas of business and develop critical skills in business communications.

Specialized knowledge
Upper years provide an opportunity to choose a concentration or continue without a concentration. It is also possible to pursue a double concentration.

Employability Passport
All BCom students will complete Sprott’s Employability Passport, a four-year career development program that equips students with the job-ready skills and self-awareness to find meaningful employment and career success.

Did you know Sprott offers business-related minors, such as entrepreneurship and arts management, for students in other programs?
Prepare for careers in valuing projects and value the decisions of the financial manager. Allocate their firms’ capital to invest in value-enhancing projects and how financial markets value the decisions of the financial manager. Prepare for careers in valuing projects and organizational levels. Prepare for careers in general management, management consulting, training and development, employee relations and strategic human resources.

Finance
Examine how financial managers appropriately allocate their firms’ capital to invest in value-enhancing projects and how financial markets value the decisions of the financial manager. Prepare for careers in valuing projects and sustainable investing by adopting the UN Principles for Responsible Investing and ESG into their strategies. And, in the course Developing Creative Thinking, business students collaborate with other Carleton students and communities in Tanzania, Northern Canada and Ottawa on projects that address issues such as water and food sustainability.

Marketing
Gain the critical thinking, analytical and creative skills to effectively manage the development, pricing, promotion and distribution of products and services, both for for-profit and not-for-profit organizations. Learn how to build and sustain high-value customer relationships in competitive environments. Prepare for careers in marketing strategy, sales, advertising, brand management, customer relationship management, marketing research, digital marketing and e-commerce.

Supply Chain Management
Develop the essential skills and expertise to manage geographically dispersed networks of suppliers, manufacturers, logistics service providers, transportation carriers, distributors, service support operators and customers.

The Sprott experience
At Sprott, you will be part of a connected and caring community. We’re home to 13 student-run organizations through which you can meet fellow students, develop leadership skills and build your professional network. In addition, students gain real, resume-building experience through initiatives such as the Sprott Student Consulting Group, Sprott Student Investment Fund and the Innovation Hub.

Concentrations
Accounting
Prepare for careers in financial or management accounting, auditing and taxation. Within the BCom, you can complete all of the academic courses required to enter the Chartered Professional Accountant (CPA) Professional Education Program. Co-op hours in an approved placement can be counted toward the CPA practical experience requirement. Sprott also offers a Master of Accounting (MAcc) program. MAcc graduates can proceed directly to the CPA Common Final Exam.

Entrepreneurship
Learn about the entrepreneurial process by experiencing all of the stages in starting a business, from idea inception to development to implementation in the marketplace. BCom Entrepreneurship students take courses with students across all faculties, creating a collaborative and interdisciplinary classroom environment.

Finance
Examine how financial managers appropriately allocate their firms’ capital to invest in value-enhancing projects and how financial markets value the decisions of the financial manager. Prepare for careers in valuing projects and sustainable investing by adopting the UN Principles for Responsible Investing and ESG into their strategies. And, in the course Developing Creative Thinking, business students collaborate with other Carleton students and communities in Tanzania, Northern Canada and Ottawa on projects that address issues such as water and food sustainability.

Management
Develop employer-valued skills and experience in managing and understanding people and their work relationships at individual, group and organizational levels. Prepare for careers in general management, management consulting, training and development, employee relations and strategic human resources.

Marketing
Gain the critical thinking, analytical and creative skills to effectively manage the development, pricing, promotion and distribution of products and services, both for for-profit and not-for-profit organizations. Learn how to build and sustain high-value customer relationships in competitive environments. Prepare for careers in marketing strategy, sales, advertising, brand management, customer relationship management, marketing research, digital marketing and e-commerce.

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Careers
BCom graduates find rewarding careers across a variety of functions and sectors. Sprott’s Business Career Management Centre provides a range of career services, including access to job postings, career advising, workshops and employer connections.

Based on surveys of graduates from 2017-2019, 93 per cent of BCom respondents were employed within one year of graduation.

Sample career paths
- advertising
- business analytics
- Certified Professional Accountant (CPA)
- consulting
- corporate finance
- digital marketing
- entrepreneurship
- financial advisor
- financial planner
- international business
- international development
- investment banking
- marketing
- strategic human resources
- supply chain management
- sustainable business
- technology consulting
Communication and Media Studies

carleton.ca/communication | Co-op available

Media shape our world. The technologies, images, and messages around us influence how we think and what we think about. So, how can we learn to think critically and act effectively? What tools do we need to transform our communication environments for social good? How do communications infrastructures, policies and regulations play a role? How can we make an impact as communication professionals? These are just a few of the fundamental questions that the Bachelor of Communication and Media Studies degree will help you answer.

Program of study
The Bachelor of Communication and Media Studies program at Carleton is offered as an Honours degree and as a Combined Honours program.

Students will choose from courses that cover the past, present and future of media; the uses and abuses of technology; the economics, politics and regulation of communication; the media in local and global contexts; the interface between culture, communication and identities; and the analysis of texts, images and rhetoric.

Skills-based workshops
In fourth year, you will select one course from a menu of hands-on media production workshops that will provide you with the skills you need to succeed in today’s job market. Options include workshops in podcasting; social media analytics; speech writing; public engagement and consultation; and event management and community partnerships.

The capital advantage
Carleton University’s prime Ottawa location places you near the centre of Canadian decision-making about communication and media policies and regulations. Ottawa is a window to the world: it is bilingual and vibrant, and it is also the centre of public life in Canada. Studying in the capital city provides you with access to government policy-makers, public and private agencies, non-governmental organizations, cultural institutions and world-class research facilities.

Careers
Careers in communication and media industries are rapidly expanding. Our graduates are thriving in rewarding and productive careers in a variety of fields, from advertising and strategic communications to law, market research and data analysis, policy development, education and more. They work as political advisors to members of parliament; communication strategists in government, NGOs and corporations; entrepreneurs; and media industry and cultural policy analysts. As a graduate of our program, you will have a solid foundation from which to intervene critically in discussions about the media, their impacts in and across a variety of sectors, and the role communication plays in fostering a more just and equitable society.

Experiential learning is an important part of the undergraduate program in Communication and Media Studies. Students in professor Sarah Smith’s Visual Media and Communication course learn inside the classroom and in community locations, such as the Carleton University Art Gallery.
Carleton’s initial partner for the Computer Science Industrial Applications Internship Option is Shopify, one of the world’s leading e-commerce platforms. This option provides students with work experience that is integrated with their Bachelor of Computer Science studies.
Computer Science

Carleton’s Computer Science program teaches you the principles of solving computational problems while giving you up-to-date applied skills for working on cutting-edge projects and building the technology of tomorrow.

Program of study

Computer science plays a central role in business, communication, science, entertainment and medicine. As the range of computer applications continues to expand, so does the demand for computer scientists. Computer science is an ever-changing discipline that studies the theory, design, and implementation of computer applications and systems. You will learn to use computing and software development techniques to solve the problems we face in business, science and society today and those we will face tomorrow.

The Computer Science program at Carleton is organized into diverse streams so you can develop a particular expertise. Our specialty streams provide an opportunity to concentrate on one important area of computer science, and our multidisciplinary streams give you the chance to examine areas of increasing opportunity for computer scientists. All streams share a common core of computer science courses. No matter which stream you choose, you will gain expertise in all the fundamentals, including programming, algorithms, software engineering, databases and web applications.

Specialty streams

AI and Machine Learning
This new stream includes courses on artificial intelligence, machine learning and neural networks. Transportation, finance, business, manufacturing and agriculture are being transformed by artificial intelligence and machine learning. LinkedIn witnessed a 190% increase from 2015 to 2017 in terms of skills required for AI-based jobs, and reports project 20 million jobs in artificial intelligence by 2023. Machine learning is also today’s highest-profile research area in computer science.

Algorithms
If you have strong mathematical abilities and wish to pursue an advanced degree or a career in cutting-edge research after your bachelor’s degree, this stream is designed for you. In addition to core courses in computer science, this stream includes foundational courses on algorithms that will teach you to design, analyze, experiment with and reason about the algorithms that arise in modern applications.

Computer and Internet Security
In this stream, you will learn about the security problems faced by computing and communication networks, and how to build software that defends against attacks.

Computer Game Development
Computer game development has become a sophisticated subject, drawing on advanced knowledge in a number of areas of computer science, such as artificial intelligence and computer graphics. In this stream, you will learn about both the principles and practice of designing and developing modern computer games.

Software Engineering
In this stream, you will extend the software development skills gained in our core program with specialized software engineering knowledge in areas like quality assurance, project management and user interfaces.

Multidisciplinary streams

Management and Business Systems
This stream deals with business and the application of computing within large business organizations.

Industrial Applications Internship Option
The internship option gives exceptionally qualified students an opportunity to gain work experience that is tightly integrated with their Bachelor of Computer Science studies. Students in the internship option are both full-time Computer Science students and paid employees of the industrial partner. Carleton’s initial industrial partner is Shopify, an Ottawa-based company that has created one of the world’s leading e-commerce platforms. In addition to providing students with a salary, Shopify covers the student’s tuition and educational expenses. Students are taught all the fundamentals of the Computer Science degree while working with professional developers at Shopify, learning how these fundamentals apply to solve real problems for customers. Graduates of this program will be well prepared for a career in Canada’s top software-development companies.

Program options

The Bachelor of Computer Science is available as an Honours degree, with the optional choice of streams, and a Major degree for those desiring a less-specialized program. We also offer a Combined Honours program with Mathematics.

The capital advantage

Ottawa boasts a vibrant high-tech sector, comprised of both established multinational firms and cutting-edge startups. As Canada’s national capital, Ottawa also offers a full range of employment opportunities with federal government departments and affiliated agencies.

Careers

Carleton Computer Science graduates go on to meaningful and rewarding careers in:

- applications for biotechnology, artificial intelligence, computer gaming, business and mobile devices
- large-scale software design and development
- software and systems security analysis
- web services and infrastructure

Many Carleton Computer Science graduates continue to graduate school, where they study and research more advanced topics and work with research faculty in areas such as Data Science, Artificial Intelligence and Machine Learning, Computer Security and more.
Economics is relevant to almost every aspect of our lives. At its core, it is the study of reasoned choice in the context of scarce resources and competing interests. Economics provides insight into important social issues such as how to build cost-effective, quality health care and education, how to best respond to crises, how to combat income inequality and how to design social programs and the tax system.

Knowledge of economics is crucial in many professional fields including labour relations, law, politics and diplomacy, banking, business and international relations. In this program, you will learn about how individuals, organizations and governments make decisions and how markets and economies function, and you will gain highly marketable skills of conducting and interpreting evidence-based research.

Program of study
In Carleton’s Bachelor of Economics (BEcon) you will study the operation of market-based economies, examining the causes of economic growth, inflation, unemployment and international trade. You will learn about how governments manage their economies by developing and administering policies to regulate activities such as trade, taxes and competition. You will develop a foundation in economic theory and modern techniques of data analysis to enable you to carry out independent research projects.

Students in the BEcon who wish to focus their studies in particular areas of economics may add one or a combination of two of the following concentrations:

- Computational Analysis; Economic Data Science
- Development; International Political Economy; Natural Resources, Environment and Economy
- Economic Theory; Mathematics and Quantitative Economics

Financial Economics
The department also offers an array of courses on various relevant topics outside of concentrations, such as health economics and pandemics, or behavioural economics and market design.

Carleton’s Economics program offers the opportunity to gain work experience through co-operative education or through a practicum and internship placement. There are also opportunities to get involved in research by assisting faculty with their projects or in our economics laboratory (CELBER). A BEcon Combined Honours is also available for students who wish to study both Economics and another eligible discipline.

The capital advantage
Carleton’s location in the nation’s capital gives you unique access to a wide range of resources in the public service. You will benefit from a wealth of research facilities and libraries in the city as well as the departments and agencies of the federal government.

Careers
By pursuing a degree in economics, you will develop the sound problem-solving, communication, analytical and research skills that employers are looking for.

Carleton Economics graduates can be found working in many different federal and provincial government departments and agencies, including:

- Agriculture and Agri-Food Canada, Bank of Canada, Canada Mortgage and Housing Corporation (CMHC), Canada Revenue Agency (CRA), Department of Finance Canada, Statistics Canada and Global Affairs Canada, private-sector businesses (including high-tech), banks, financial institutions and insurance companies, Canadian consulting firms and non-governmental organizations.
Our renowned Bachelor of Engineering degree offers an exceptionally comprehensive range of programs. At Carleton, you will engage in practical, real-world training, work on engaging and challenging team projects, and express your creativity and innovation in preparation for a rewarding career in a highly desired engineering field.

**Program of study**

Carleton’s Bachelor of Engineering is renowned within Canada and internationally. Programs under this degree equip graduates with the knowledge to undertake a broad range of engineering activities, including the design of aircraft, vehicles, machinery, software, telecommunications systems, medical devices and solutions to environmental challenges. Along the way, you will be exposed to exciting advances in areas such as sensor technologies, robotics and global communications networks. The general curriculum begins with a foundation in mathematics, physical sciences and engineering principles. You will then proceed in the program to which you were admitted. Each program provides opportunities to specialize your studies according to your interests and ambitions. All programs offer an optional minor in Business, among others. Opportunities for graduates of these programs exist in many sectors including industry, education and government with careers spanning research, product development, design, management and consulting.

All of our Engineering programs are accredited by the Canadian Engineering Accreditation Board.


Co-op employment
Through Carleton, you can obtain rewarding co-op employment with well-known organizations such as:
- Amazon
- BlackBerry QNX
- Bombardier
- Canadian Space Agency
- Ericsson
- General Dynamics Canada
- Google
- Honeywell
- IBM
- National Research Council Canada
- Nokia
- Stantec
- Tomlinson
- Public Services and Procurement Canada

Aerospace Engineering
Our Aerospace Engineering program emphasizes the development of analytical, computational, and hands-on engineering and design skills related to the aerospace field. The broad range of topics and applications included in this discipline are covered in four main streams: Aerodynamics, Propulsion and Vehicle Performance; Aerospace Structures, Systems and Vehicle Design; Aerospace Electronics and Systems (aircraft control, communication and navigation systems); and Space Systems Design (astronautics and space/satellite technology).
All four streams emphasize the development of practical and problem-solving skills based on hands-on laboratory and design work.

Career paths
You can work on the design and development of:
- aircraft communication, navigation and control systems
- aircraft/spacecraft manufacturing, certification, modification and repair/overhaul
- launch vehicles, spacecraft, satellite systems and operations
- piloted and autonomous aircraft, including aerodynamics, structures, avionics and propulsion systems

Architectural Conservation and Sustainability Engineering
Sustainability has become a key consideration in both society and engineering. There is a growing need for engineers with expertise in the closely related areas of heritage conservation and sustainable building design and operation. Carleton’s program in Architectural Conservation and Sustainability Engineering teaches students a modern approach for the design and retrofit of buildings that holds sustainability as the guiding objective while respecting architectural history and significance. Students learn to consider the life cycle costs and environmental impacts of building materials, energy demand, occupant comfort, and the effective reuse and conservation of existing structures. Students in the program work closely with Carleton’s Architectural Studies students.

Career paths
Your skills can be applied to:
- conservation of heritage structures
- digital tools for new and historic building surveying and recording
- green building design and assessment
- life cycle assessment of green building technologies and materials

Biomedical and Electrical Engineering
The field of health care relies increasingly on technology, with biomedical and electrical engineers leading the way. Carleton’s program teaches you principles of electrical engineering and science as they apply to biotechnology and medicine. You will learn about the design of diagnostic and therapeutic devices, bioinstrumentation, automated signal and image analysis, computing and display devices and biometric data readout systems. You will also receive complete instruction in general electrical engineering. The program is designed to prepare you for the prerequisite courses required for many medical schools in North America.

Career paths
Your skills can be applied to:
- biomedical informatics and teledicine
- biomedical instrumentation and biosensor design
- biosignal processing and imaging diagnostic technologies
- clinical and health care engineering
- general electrical, electronics and instrumentation engineering

Biomedical and Mechanical Engineering
The Biomedical and Mechanical Engineering program integrates life sciences with the traditional mechanical engineering topics of solid mechanics, dynamics, fluid mechanics (expanding to biofluids), thermodynamics, heat transfer, materials (biomaterials), control systems and robotics to analyze and solve problems related to biomechanical engineering, biotechnology and medicine. The program provides students with skills that enable the development of advanced components, systems and techniques for biomechanical applications that are crucial to modern health care. The curriculum is designed with an emphasis on the development of practical and problem-solving skills based on hands-on laboratory and design work.

Career paths
You can work on the design and development of:
- advanced drug therapy techniques
- biomedical devices including artificial organs, limbs, joints, heart valves, cardiovascular devices and dental implants
- clinical engineering involving medical technology in hospitals
- interactive robots for biomedical applications, such as surgery and physiotherapy
- nanotechnology for the manipulation of biological cells and genes

Civil Engineering
Civil engineers provide and maintain all of the infrastructure that we depend on daily. They plan, design, construct, operate, manage and

Carleton’s Urbandale Centre for Home Energy Research is a long-term research-intensive attempt to respond to the growing demand for energy-efficient houses. Carleton Engineering students have played a pivotal role in modeling systems for the 1,600-square-foot house and the students of tomorrow will continue to use the building to push the envelope forward on home energy use.
maintain airports, bridges, buildings, dams, highways, railways, pipeline systems, tunnels, water distribution systems and treatment facilities. Carleton’s Civil Engineering program starts by giving students a thorough background in mathematics, chemistry, physics, thermodynamics, geology, experiment design and civil engineering materials. In the final two years of the program, students focus on engineering design in the areas of structural, geotechnical, transportation and municipal engineering. Elective courses allow students to further specialize in the area of their choice. The program culminates in a practical fourth-year design project where the students apply their knowledge to a real-world design problem.

**Career paths**
Your skills can be applied to:
- build, evaluate and maintain infrastructure
- design structural, geotechnical, transportation or municipal systems
- infrastructure safety, security and comfort
- on-site construction management and supervision

**Communications Engineering**
Carleton is proud to offer the only Communications Engineering program in Canada. Communications engineers play a vital role in today’s world, serving as the architects of cloud-computing smart applications, next-generation internet applications, social networking technologies, network security, privacy and trust, advanced 5G and 6G wireless systems, and AI and machine learning for networking. The program provides you with the flexibility to succeed in a world of rapidly changing technology, alongside the specific knowledge and skills that are highly valued by employers in the telecommunications and information industries. This program will expose you to cutting-edge technologies, including artificial intelligence and machine learning, advanced communications applications in autonomous vehicles and satellites, and a fully connected world where privacy and security prevail.

**Career paths**
You can work on the design and development of:
- AI and machine learning for networking
- cloud computing, data centre networks and next-generation internet applications
- communication security, privacy and trust
- computer networks and emerging applications, e.g., autonomous and aerial vehicles
- next-generation 5G/6G wireless networks, satellite communications and navigation
- smart and Internet of Things (IoT) applications, e.g., smart environments, e-health, industrial IoT

**Computer Systems Engineering**
Computer systems engineers combine both hardware and software to design, develop and implement integrated computer systems for applications in such areas as robotics, artificial intelligence, aerospace and avionic systems, autonomous systems, multimedia applications and cloud computing. Carleton’s Computer Systems Engineering program will enable you to learn how to engineer complex systems based on computers and acquire an understanding of computers as integrated software/hardware systems.

**Career paths**
You can work on the design and development of:
- autonomous, embedded aerospace systems
- cloud computing and social network applications
- robotics, smart vehicles and artificial intelligence
- smart grids and wireless sensor networks, and Internet of Things (IoT) systems
Environmental Engineering
Environmental engineers ensure that we have clean water to drink, clean air to breathe, clean soil to grow our crops and clean energy to sustain our growth. The goal of environmental engineering is to offer sustainable and green solutions to many of the issues and challenges facing our society and to provide a clean and healthy environment for us and our ecosystem. Climate change will impact our quality of life and our environment, and environmental engineers play a key role in reducing these impacts and adapting to these changes. Environmental engineers use engineering and science principles to design innovative treatment technologies that help to minimize our environmental footprint, prevent pollution, reduce greenhouse gas emissions, improve air quality, ensure drinking water safety and achieve environmental sustainability.

Career paths
You can work on:
- assessing and improving water quality
- ensuring drinking water safety
- reducing greenhouse gas emissions
- improving our environmental footprint
- preventing pollution
- developing effective and efficient water, wastewater and solid waste treatment systems
- providing clean energy alternatives to reduce greenhouse gas emissions
- assessing and improving air quality
- ensuring clean air to breathe
- designing and improving treatment systems for water, wastewater and solid waste
- mitigating and adapting to climate change
- providing clean energy alternatives to reduce greenhouse gas emissions

Mechanical Engineering
Mechanical engineering is the study of how to design and build systems to meet specific objectives that involve the transformation, transmission and control of energy and matter. Mechanical engineers are involved in a myriad of areas. They transform energy into work, work into useful mechanical energy, and mechanical energy into heat, and vice versa. Mechanical engineers are involved in the design and development of systems, machines, devices, vehicles and machines that use or convert mechanical energy to perform useful work.

Career paths
You can work on:
- ground, sea and air transportation systems
- heating, ventilation and air conditioning systems
- manufacturing and robotics
- power generation and energy conversion
- resource extraction and processing

Software Engineering
Software engineers design, develop, test, and maintain the software components of computer systems and applications. Software engineers also work on the design and development of software to support computer systems and applications, including those that control and monitor the operation of computer systems and other devices that interact with the physical world, such as control systems, robotics, and embedded systems.

Career paths
You can work on:
- designing and building software systems
- developing and testing software systems
- designing and developing software for embedded systems
- designing and developing software for control systems
- designing and developing software for robotics
- designing and developing software for embedded systems

Electrical Engineering
Electrical engineers use engineering principles to develop, design and build electrical systems and devices. Electrical engineers work on the design and development of electrical systems and devices, including generators, motors and power grids, high-speed integrated circuit chips, local area networks, smartphones, fibre optics and satellite communications, vehicular electronic controls and navigation.

Career paths
You can work on:
- electrical power systems, including generators, motors and power grids
- high-speed integrated circuit chips
- local area networks, smartphones, fibre optics and satellite communications
- vehicular electronic controls and navigation

Engineering Physics
Engineering Physics is a challenging and elite program for those students who want to combine the strengths of physics and engineering. You will obtain an unusually broad and strong foundation in material science, applied physics, electronics and nanotechnology, and learn to apply it in the development of new technologies which include, but are not limited to, nanotechnology, semiconductor devices, optical systems, telecommunications and related computer hardware. In your senior year, you may specialize in many other areas of interest.

Career paths
You can work on:
- designing and building electrical systems and devices
- developing and testing electrical systems and devices
- designing and developing electrical systems and devices for embedded systems
- designing and developing electrical systems and devices for control systems
- designing and developing electrical systems and devices for robotics
- designing and developing electrical systems and devices for embedded systems

Sustainable and Renewable Energy Engineering
Sustainable and renewable energy engineering is the study of how to design and build systems to meet specific objectives that involve the transformation, transmission and control of energy and matter. Sustainable and renewable energy engineers are involved in a myriad of areas. They transform energy into work, work into useful mechanical energy, and mechanical energy into heat, and vice versa. Sustainable and renewable energy engineers are involved in the design and development of systems, machines, devices, vehicles and machines that use or convert mechanical energy to perform useful work.

Career paths
You can work on:
- designing and building sustainable and renewable energy systems
- developing and testing sustainable and renewable energy systems
- designing and developing sustainable and renewable energy systems for embedded systems
- designing and developing sustainable and renewable energy systems for control systems
- designing and developing sustainable and renewable energy systems for robotics
- designing and developing sustainable and renewable energy systems for embedded systems

Biomedical and Electrical Engineering students Maryam Kaka and Victoria Madge display their Integrated Concussion Assessment System (I-CAS) mobile application, which aims to migrate clinical concussion testing and recovery monitoring to the home environment.
An abiding strength of Carleton University is its long tradition of study and research focusing on international problems and perspectives.

Program of study
Carleton's Bachelor of Global and International Studies (BGInS) degree takes advantage of Carleton's strengths, and its location, to provide an undergraduate education in global and international issues that can give you an advantage in today’s job market. The program has four interconnected components. The core course sequence provides all students with a shared multidisciplinary foundation in global and international studies. The 18 specializations cover specific international and global themes or geographical areas, giving you the opportunity to focus your studies according to your interests. A second-language requirement and an international experience requirement are included so that you can graduate not only with new knowledge and skills but also an expanded worldview.

Core courses
All BGInS students are required to take the core course sequence, which provides you with a strong multidisciplinary foundation in global and international studies:

First-year courses
- Global History
- International Law and Politics
- Ethnography, Globalization and Culture

Second-year courses
- Ethics and Globalization
- Global Literatures
- Globalization and International Economic Issues

Global and International Studies

carleton.ca/bgins | Co-op available

Global and International Studies student Maheep Sandhu had the opportunity to travel throughout Uganda during his work placement at a non-profit in Kampala.
Third-year courses
- Global and International Theory
- Places, Boundaries, Movements and Global Environmental Change

Fourth-year courses
- Honours Seminar in Global and International Studies

Specializations
Africa and Globalization
Study a wide range of issues as they apply to Africa, including democratization, human rights, international development, youth cultures, migration and refugees, colonialism and postcolonialism, and social justice.

Europe and Russia in the World
Study the region of Europe, Russia and Eurasia in its broader global context, including its history, society, politics, culture, economics and languages. You may focus on particular countries in the region, institutions such as the European Union, or themes such as migration, civil society, EU enlargement, globalization and identity.

French and Francophone Studies
Gain an understanding of the multiple varieties of spoken French and the diversity of French literatures across continents. Study how both are patterned globally through issues and contexts ranging from colonial and postcolonial histories, transnational contacts, cultural transfers and experiences of migration.

Global Development
Gain a multidisciplinary perspective on this broad and important field by taking foundational courses in anthropology, economics, geography and political science. Learn about the way the world is unfolding in the face of increasingly urgent challenges from climate change to global epidemics.

Global Genders and Sexualities
Study the ways that bodies, genders and sexualities are shaped on local, national and international spaces. You will explore the ways that race, colonization, citizenship and ability shape and govern our intimate lives.

Global Inequalities and Social Change
Study global inequalities and social change, combining theoretical and applied approaches. Gain an understanding of multiple dimensions of inequality through topics such as poverty, racism, colonialism and gender. Acquire knowledge of various forms of resistance to oppression, including social movements and transnational solidarity.

Global Law and Social Justice
Develop an understanding of law as a key mechanism by which global issues, identities and institutions are organized and contested in this contemporary period of globalization. Explore legal frameworks as they relate to topics such as human rights, migration, trade and armed conflict.

Global Media and Communication
Media and communication technologies are engines of globalization that shape the cultural environments in which we live. You will study global media and communication in historical and contemporary contexts and develop the knowledge and skills necessary for working in global and international settings as communicators, researchers, analysts or advocates.

Global Migration and Transnationalism
Gain invaluable expertise for a world on the move. Study the movement of people and ideas.
with national and international leaders in topics such as citizenship, the global refugee regime, multiculturalism, state security, transnational identities and violent extremism.

Global Politics
Gain an understanding of global political issues through a problem-focused and applied approach to the study of such topics as the gap between rich and poor, democracy and its economic and political benefits, human rights, war and peace, ethnic conflict and the politics of the environment.

Global Religions: Identity and Community
 Engage in the academic study of religion and become literate in the history and contemporary development of the world’s diverse religious traditions. Explore how religion informs identities and shapes power relations in different societies. Gain insight into the ways people use religion to find meaning and forge communities in an increasingly interconnected world.

Global and Transnational History
Study the global community from 1400 to the present, with a particular focus on the non-western world, and explore global connections, movements and trends. You’ll gain an understanding of the historical dialogue between forces of global integration and forms of local knowledge and experience.

Globalization, Culture and Power
Use the insights of anthropology to become conversant with the cultural impacts of globalization in terms of economic inequality, ecological vulnerabilities, colonial legacies, health practices and institutions, and new visions of human rights.

Globalization and the Environment
Understand the social and political dimensions of global ecological change, from questions of global water justice and international agreements on greenhouse gas emissions to the links between climate change and inequality. Learn about policy alternatives on global environmental challenges, such as urban sustainability, environmental disasters and displacement, and transitions to a low-carbon society.

International Economic Policy
This specialization’s relatively non-technical approach will give students with diverse backgrounds the opportunity to learn about issues related to economic globalization and gain an understanding of the economic forces invoked by government intervention.

Latin American and Caribbean Studies
Develop an integrated understanding of this important geopolitical region. Study the region’s history, politics, geography and cultures, and learn about interdisciplinary approaches to understanding sustainable development, democracy, human rights, social justice and cultural diversity.

Teaching English in Global Contexts
Study the place of the English language in an increasingly interconnected and globalized world, and the benefits and challenges it brings. Learn how to teach English as an international language using current methods and obtain valuable accreditation as an English teacher.

Language requirement
A basic requirement for engaging with the world is the ability to speak in more than one language. For this reason, the BGInS program expects students to pass a second-language requirement. Those incoming students who do not have skills in a second language can take courses offered by our School of Linguistics and Language Studies (SLaLS) or our Department of French. Options include Arabic, Chinese (Mandarin), French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish and ancient languages.

“Studying in Global and International Studies has provided me with an interdisciplinary approach to understanding the world. Focusing my studies in Africa and Globalization has provided me with an enriched and enlightened way of understanding development in its unique and diverse approach. I chose this concentration because I want to be a part of Africa’s future, and the professors have readily provided me with the academic tools to face our changing world.”

Tine Ndhlovu, Bachelor of Global and International Studies student

Learning another language will not only help you become a culturally literate global citizen but may also enhance your future employment prospects.

International experience
It is one thing to study a part of the world, and another to immerse yourself in its culture. For this reason, BGInS features an international experience requirement as an integral part of the program. You can fulfill this requirement by studying abroad under one of Carleton’s international exchange agreements, undertaking an international work placement, completing a Carleton University course taught abroad, participating in an experiential learning opportunity abroad, studying abroad on a letter of permission or taking our innovative Global and International Group Project course.

Careers
A global perspective, intercultural understanding and second-language ability are increasingly important skills for success in the workplace. A BGInS degree can provide the foundation for careers in advertising, business, communications, foreign service, journalism, marketing, policy analysis, public relations and many other fields.

A BGInS degree can also prepare you for graduate school in a range of disciplines.
Health Sciences professor Kristin Connor, whose research focuses on the developmental origins of health and disease, takes an interdisciplinary approach to health sciences education.
Health Sciences

carleton.ca/healthsciences

Carleton’s Bachelor of Health Sciences (BHSc) is a unique interdisciplinary and career-focused program that provides the knowledge and skills required to understand, participate and succeed in the rapidly evolving healthcare and research landscapes. This program provides a strong foundation in the biological and biomedical mechanisms of human health and disease as well as an in-depth understanding of the social, political and environmental determinants of health.

Program of study
The BHSc program offers a strong foundation in health sciences that can prepare you for professional schools (e.g., medicine, dentistry, or veterinary medicine), a post-graduate degree in health research and for careers in health-related fields like public health, global and environmental health, and health policy.

The BHSc program offers five concentrations, which can be combined in unique and innovative ways:

Biomedical Sciences
This concentration provides a strong foundation in biological and biomedical sciences and allows you to explore the genetic, biochemical, immunological, physiological and developmental aspects of human health. In addition, a broader understanding of human health is gained by examining current issues from cultural, psychological, technological and environmental perspectives.

Disability and Chronic Illness
This concentration is unique to Carleton. It introduces you to the biomedical, social and psychological basis of chronic illnesses and explores treatment strategies used to enable productive and healthy lives. Chronic illnesses and disabilities affect the quality of life of a large number of people and include heart disease, cancer, chronic pain conditions, mental health problems and physical disabilities. You will learn about biomedical, cognitive and technological advances, as well as the ethical dilemmas affecting intervention and treatment.

Environment and Health
This concentration explores the influence of our environment on our health from a biological, chemical and epidemiological perspective. You will learn how these complex environmental factors interact to make individuals either more vulnerable or more resilient to illness and disease. You will also study issues related to the prevention and treatment of environmentally linked illnesses such as cancer, asthma and neurodegenerative disorders.

Global Health
This concentration provides you with the biological, psychological and social knowledge required to address current and developing health issues that affect national and international populations. It focuses on real-world issues of increasing relevance in our interconnected global community—such as globalization, climate change, infectious diseases and environmental pollution—in the context of the social and political factors that influence healthcare practices and policies.

Health Throughout the Lifespan
This concentration focuses on health and illness through the stages of human life. Few health sciences programs in Canada include lifespan studies, and Carleton’s program is unique in featuring courses that explore the entire lifespan, from neonatal development to old age. You will learn about the biological processes of aging, including how events occurring in early life can have effects that appear much later, in the form of medical conditions such as diabetes, cardiovascular disease and depression. In addition, you will have the opportunity to learn how factors such as gender and social conditions can influence health.

Hands-on approach
All concentrations in the BHSc program provide a hands-on approach that includes laboratories, workshops and seminars beginning in first year. Students can take advantage of programs offered at Carleton that include summer research internships and international experience opportunities. The fourth year of the program provides a capstone experience with various options and hands-on experiences, including

local, national or international research field placements, which (pending satisfaction of academic requirements) can advance your personal and professional goals.

Double concentration and minor options
One of the other unique aspects of the program is the ability to customize your studies to meet your goals. This includes the ability to take upper-year courses in other concentrations or programs, do a minor in another program and take a double concentration. For example, you might wish to combine the concentrations in Health Throughout the Lifespan and Disability and Chronic Illness to focus on issues relating to healthy aging. Alternatively, you can take a minor in Business if you are interested in healthcare management. Taking a double concentration or a minor can add value to your degree for when you enter the job market, or when you apply to professional or post-graduate programs. If you are interested in these options, please contact the undergraduate administrator for more information.

The capital advantage
Carleton’s location in the nation’s capital has enabled the university to forge partnerships in the area of health with both the public and private sectors. There are numerous organizations, agencies, research institutes and hospitals in the region that together provide a knowledge base unique to Ottawa.

Careers
There is great demand for highly skilled workers in the health sector in Canada. The concentrations in the BHSc program are designed to prepare you for a diverse array of health careers, and also provide excellent preparation for medical school and other professional training.
Humanities

carleton.ca/bhum

In the Bachelor of Humanities, students read the world’s most influential books and explore the world’s most exciting ideas in art, philosophy, history, literature, classics, music, religion and science.

Program of study
In this interdisciplinary liberal arts program, students study the world’s greatest ideas, books and art works produced by thinkers from the span of recorded world history—from ancient Mesopotamia to modern America. The emphasis is on ideas, explored through small discussion groups and writing assignments. The typical Humanities student loves to read and is excited about sharing ideas with students and professors.

Bachelor of Humanities and Biology
In this Combined Honours degree, students combine the liberal arts with science training. This program combines the insights into nature given by modern science with the insights into the human spirit given by the Great Books.

Close-knit creative community
The Bachelor of Humanities program is small with only 70 students admitted each year. The students form a dynamic and close-knit community, and are known personally by their professors, receiving a level of attention and personalized instruction that is hard to find elsewhere. Students form life-long friendships as they participate in an extensive cultural program that involves a student literary journal, music nights, dramatic readings, visits to the National Arts Centre and National Gallery, and subsidized cultural trips to Montreal and New York City.

Core seminars
At the heart of the Bachelor of Humanities are four core seminars, one for each year of the program. Each seminar focuses on a different discipline—literature, philosophy, politics and religion—and on a different time period, from the ancient world to the present day. All core seminars are team-taught by two professors, include small discussion groups and are restricted to Humanities students.

Careers
The Bachelor of Humanities can take you anywhere you want to go. Humanities students graduate with outstanding research, writing and communications skills, and they normally rise very quickly in their chosen professions. Humanities students can ask to be paired with a professional mentor and can gain insight into the workplace before they graduate. Graduates may go on to rewarding careers in law, journalism, teaching, medicine, business, policy analysis, foreign service, international relations, public service, writing and research. Humanities graduates regularly gain admittance to prestigious graduate schools, law schools and medical schools.

Bachelor of Journalism and Humanities
In this degree, students cultivate their love of ideas while training for a career in journalism. Students receive professional training in newspaper, radio, television and new media journalism while gaining an in-depth understanding of world culture and history.
Industrial Design

carleton.ca/id | Co-op available

Industrial designers are the professionals who determine the features, appearance, materials and ergonomics of products we use daily—from toasters and cell phones to sporting goods and tools. As stated by the World Design Organization, “Industrial Design is a strategic problem-solving process that drives innovation and builds business success, which leads to a better quality of life through innovative products, systems, services and experiences.”

**Program of study**

Our unique and internationally respected Industrial Design program blends studies in design with applied sciences (such as math and physics) and the social sciences (such as psychology and business). You can complement your studies with a minor in areas such as Business, Psychology, Sociology or Anthropology.

We focus on the process from concept and design through to the manufacturing and everyday use of the product. There is also an emphasis on the context and social purpose of design. Beginning in first year, you learn design processes and methods by completing creative projects. Over the course of the program, you move progressively from academic studies to more intensive design studio sessions, from theory to practice, while undertaking increasingly complex design projects. Students work on drawings, models, mock-ups and simulated products, while learning about materials, marketing, environmental issues, user needs and user testing. Much of your work will take place in team situations.

In fourth year, the focus is on managing multiple design projects organized around a comprehensive major design project. An intellectual understanding of design issues is fostered through a professional practice course, an industrial internship and a design seminar.
Industrial Design students have opportunities to make real differences worldwide. Industrial Design student Tatum Dietrich designed the Moshi Inge Stove, a compatible stove system for safe cooking in rural Tanzania. The prototype featured here was a part of her fourth-year Capstone project alongside International Business student, Clarissa Garcia.

Exceptional facilities
Industrial Design students have access to extensive facilities ranked among the best in North America, including modelling and prototyping laboratories (wood, plastic, metal), well-equipped design studios, wireless computing facilities, rapid prototyping equipment, a mass-production/mould simulation laboratory, laser cutting, 3D scanning and CNC (Computer Numeric Control).

Practical work experience
Internships are a requirement in the Bachelor of Industrial Design (BID) and last a minimum of 12 weeks. Opportunities exist in Canada and North America, Europe, Hong Kong and China.

Careers
Carleton’s BID graduates can be found working as entrepreneurs and consultants, as well as in design teams, and at major national and international companies including Autodesk, Canadian Tire, Google, Fitbit, the Government of Canada, MEC, IBM, The Luminaires Group, Umbra, Teknion, Starfish Medical and Spinmaster Toys. You can also continue your studies by completing a Master of Design at Carleton, allowing further specialization and research focus.

The Carleton advantage
Carleton University provides the widest educational opportunities in industrial design in Canada. This includes a broad-based university foundation, international exchange opportunities, and a 12-week design internship or a co-op option. The program includes theoretical and design studio courses, which implement applied skills and theory through projects.

The capital advantage
Ottawa offers a wide range of opportunities for collaborative projects with both private and public sectors. The capital also has the strongest high-tech sector in Canada, offering opportunities for innovative designers. Students also meet prospective employers at the Annual Graduation Exhibition that showcases the work of all students and highlights the projects undertaken in fourth year.
The world of information technology is always evolving. What is now commonplace was once a breakthrough. As a student in one of the Bachelor of Information Technology programs, you will acquire the theoretical knowledge and practical skills needed to address the IT issues of today and the possibilities of tomorrow.

**Program of study**

The School of Information Technology, in conjunction with Algonquin College, offers four distinct programs under the Bachelor of Information Technology: Information Resource Management (IRM), Interactive Multimedia and Design (IMD), Network Technology (NET) and Optical Systems and Sensors (OSS).

**Information Resource Management (IRM)**

The IRM program provides students with a broad understanding of information management and specific capabilities in managing digital resources as they affect research data, websites and social media. The IRM program keeps up with rapid increases in digitization and data capturing practices while providing students with skills ranging from basic data analytics to advanced big data applications.

This foundation provides a basis for building cutting-edge data analytics, machine learning and artificial intelligence-based solutions. Such skills are especially important now that the library and information technology field has moved beyond the traditional library setting to all-encompassing digital solutions in both the private and public sectors. Such skills are also critical for today’s organizations to gain a competitive advantage by having their data...
Students graduate from the IRM program with both a Bachelor of Information Technology degree from Carleton University and a Library and Information Technician Ontario College Diploma from Algonquin College.

**Interactive Multimedia and Design (IMD)**
The IMD program is designed for students who are creatively inclined, technologically adept, and are interested in all aspects of digital media. You will acquire the tools you need to take an idea or a problem and advance it through the entire process from concept to pre-production, production and post-production for practically all types of digital media. The program provides you with a multidisciplinary education through courses in computer animation, visual effects, game design and development, web design and development, user interface/experience design, visual communication and human-computer interaction. The program is then further enhanced with courses in physics, mathematics, business and social sciences. You will graduate fully equipped to work in, and shape, the digital world of the future.

The IMD program also offers streams in Animation and Visual Effects; Game Design and Development; and Web and User Interfaces/Experience.

Students graduate from the IMD program with both a Bachelor of Information Technology degree from Carleton University and an Ontario College Diploma in Interactive Media Development from Algonquin College.

**Network Technology (NET)**
The NET program focuses on the design, management, operation and installation of future complex information networks, such as those that make up the internet and cell phone networks. The program is multidisciplinary in nature, combining courses in computer and network technology with courses in physics, mathematics, business and communications. In this program, you will not only explore theories and concepts but also learn about their practical application. You will learn to design, manage, secure, operate, install and configure advanced IT networks. State-of-the-art networking labs offer hands-on training with real-world equipment. The NET program has a partnership with the Cisco Networking Academy, whereby students are trained to successfully write the Cisco Certified Network Associate (CCNA) and Professional (CCNP) certification exams to earn industry-recognized certification, which is in high demand in the job market. Students will also have the opportunity to get certification from Nokia and Juniper Networks to give them a range of skills from different equipment manufacturers.

Students graduate from the NET program with both a Bachelor of Information Technology degree from Carleton University and an Ontario College Advanced Diploma in Computer Engineering Technology from Algonquin College.

**Optical Systems and Sensors (OSS)**
The OSS program is designed to provide you with a strong IT foundation and skills in designing applications for optical systems and sensors. This program combines computer programming, automation, signal processing and optics courses with foundational courses in physics, math and business. While also acquiring a strong IT background, students will learn about optical communication networks, lasers, manufacturing and advanced optical component design through our specialized hands-on laboratories. Upper-year courses include advanced subjects such as remote sensing for autonomous vehicles and drones, medical imaging and biosensors, smart sensors in agriculture and computer vision. The program has strong ties with industry and every effort is made to ensure the program remains up to date with current trends. Students that possess both IT skills and a fundamental understanding of optical technologies are in very high demand in today's industry.

Students graduate from the OSS program with both a Bachelor of Information Technology degree from Carleton University and an Ontario College Advanced Diploma in Photonics and Laser Technology from Algonquin College.

**Co-op and graduate employers**
IRM students have been employed at Canadian Coast Guard, Department of National Defence, Employment and Social Development Canada, National Research Council Canada and Statistics Canada.

IMD students are employed at Adobe, Sony, ImageWorks, Ubisoft, Electronic Arts, MPC, Shopify, Magmic, Image-Engine and IBM Cognos.

NET students are employed at Bell, Ericsson, Health Canada, IBM Cognos, Nokia, Ottawa Paramedic Service, Royal Canadian Mounted Police and Statistics Canada.

OSS students are employed at Ciena, Mitsubishi, Nokia, OZ Optics, the RCMP and Viavi Solutions.

**Career paths**

**IRM**
- data analytics
- data visualization
- digital information management
- e-commerce
- library services (academic and public)
- web design and development

**IMD**
- computer animation
- game design and development
- human-computer interaction
- user interface experience/design
- visual effects
- web application and software development

**NET**
- business enterprises requiring network design, management and operation
- educational institutes
- finance companies
- government
- health institutes
- network design and management
- system integration
- telecom operation

**OSS**
- autonomous vehicles
- defence and security
- industrial automation
- laser industry
- medical imaging/biosensors
- optical communications
- optical component design
- remote sensing
The Bachelor of International Business gives students the foundation and global perspective to make a difference in the world. Intensive training in another language and cross-cultural skills gained through first-hand international experience prepares students for global careers.

**Program of study**
The Bachelor of International Business (BIB) delivers a truly international business education. It focuses on five key elements:

- intensive training in one of five offered languages;
- a full academic year dedicated to first-hand international experience;
- core courses in business fundamentals;
- specialized courses in international business and management; and
- the option to choose from three concentrations for further specialization. You may also complete the BIB without a concentration.

During the first two years of the BIB, you will take courses in all key areas of business. You will also complete intensive language training.

In third year, you will either study abroad at a partner institution, participate in an international internship or a combination of the two. The language you study during years one

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<tr>
<th>BIB languages</th>
<th>Study abroad locations</th>
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<tbody>
<tr>
<td>French</td>
<td>Belgium, France</td>
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<tr>
<td>German</td>
<td>Austria, Germany, Switzerland</td>
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<td>Japanese</td>
<td>Japan</td>
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<td>Mandarin</td>
<td>China</td>
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<tr>
<td>Spanish</td>
<td>Argentina, Chile, Colombia, Mexico, Peru, Spain</td>
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and two will determine where you are placed. You will then return to Carleton to complete your final studies.

**Concentrations**

**Global Financial Management and Systems**
This concentration focuses on the financial management of the multinational corporation and the global context in which it occurs. You will examine international financial markets, including currency derivatives, exchange rate determination and exchange rate risk management. You will also examine how firms raise and manage capital in an international setting and how they manage cross-border financial risks.

**International Marketing and Trade**
This concentration develops the necessary skills to help companies successfully expand to, and compete in, international markets. You will learn how to adapt business strategy to the cultural, political, legal, economical, technological, geographic and historical factors that result in buyer behaviour and marketing strategy differences around the world. You will also learn how to assess various foreign expansion alternatives that companies face when going abroad.

**International Strategy and Human Resources Management**
This concentration develops the skills required to design and execute international business strategies by linking a firm’s global environment with its internal operations and structure. Special attention is placed on the role of human resources in framing and implementing comprehensive strategies through hiring, training and evaluating personnel. Understanding the challenges of managing a culturally diverse workforce under contrasting conditions is a key factor for success in this field.

**International experience**
As a Sprott student, you will have access to many opportunities to gain international experience. These include the study abroad/international internship BIB requirement, international case competitions, Alternative Spring Break and international study tours. Our location in the nation’s capital connects you to a network of global companies, federal government departments, international agencies, embassies and high commissions.

**Sprott experience**
At Sprott, you will be part of a connected and caring community. We’re home to 13 student-run organizations through which you can meet fellow students, develop leadership skills and build your professional network. In addition, students gain real, resume-building experience through initiatives such as the Sprott Student Consulting Group, Sprott Student Investment Fund and the Innovation Hub.

**Careers**
BIB graduates find careers with exporters, importers and multinational organizations in Canada and abroad, as well as government and NGOs. Sprott’s Business Career Management Centre provides a range of career services, including access to job postings, career advising, workshops and employer events.

Based on surveys of graduates from 2017-2019, 92 per cent of BIB respondents were employed within one year of graduation.

**Sample career paths**
- business development
- consulting
- corporate finance
- digital marketing
- entrepreneurship
- export management
- foreign affairs
- international development
- international finance
- international trade
- marketing
- regulatory affairs
- strategic human resources
- tourism

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**A year of international experience**

BIB students spend a full academic year gaining international experience through either an international exchange or an international internship.

“My year abroad in Viña del Mar has been filled with so many great adventures. From gaining life-long friendships, catching the travel bug, learning about so many different cultures and even an internship in a foreign country, I have truly just lived my best life.”

Alexandra Lam studied at the Universidad Adolfo Ibañez in Viña del Mar, Chile. (Shown here in Cerro Mauco, Chile.)
Carleton’s internationally renowned Bachelor of Journalism program has produced many of the top journalists in Canada and around the world, including *The Globe and Mail*’s Dakshana Bascaramurty and Mark MacKinnon, CBC’s Andrew Chang and Susan Ormiston, CNN’s Kim Brunhuber, *The Toronto Star*’s Rosa Saba, CTV’s Stefan Keyes and Katie Griffin, Huffington Post’s Andree Lau, *Wall Street Journal*’s Greg Ip and Joel Eastwood, TSN’s James Duthie, Politico’s Anca Gurzu, *The New Humanitarian* Director Heba Aly and Diana Mehta of The Canadian Press, just to name a few.

**Journalism**
carleton.ca/journalism

Our reputation is built on the high-calibre professional training and academic instruction our students receive. You’ll develop your skills in dynamic hands-on workshops, focusing on high-quality journalism delivered via text, audio, video and various digital media. You’ll take specialized journalism courses that allow you to pursue your journalistic passions—from business to the arts, politics to health science. You’ll round out your professional expertise with studies focusing on the role of journalism in society, and you’ll build a strong foundation in another academic field of your choice.

**Program of study**
Our program will prepare you to be a digital storyteller with a skill set that opens doors to countless exciting careers. At Carleton, we know that success in the media industry depends on acquiring a solid, broad-based education. That’s why you’ll also take Canadian history and Indigenous history courses and choose electives from a wide range of other subject areas. You can even opt for a Combined Honours degree in a range of disciplines, from History or Law to Sociology, Political Science, English or one of the many other options.

**Four-year program**
In your first year, you’ll take introductory...
courses that help you understand journalism’s role in modern Canadian society and how the media industry developed through the years. You’ll also be introduced to basic journalistic principles and professional practices.

In your second year, you’ll do more hands-on work in a digital course that teaches you how to use tools such as social media and photography for journalism. Small class sizes allow for intensive instruction in your year-long reporting workshop, where you learn how to gather, organize, write and report information—the fundamental elements of any form of journalism. Your second-year journalism course will focus on the laws connected to your work in the media, from freedom of speech to rules governing such things as privacy and libel.

Third and fourth years include instruction in ethics and a range of advanced professional workshops that will help you sharpen your in-depth writing skills while mastering the techniques to produce audio, video and digital journalism across all platforms.

You’ll choose from a number of journalism courses focusing on specialized subject areas, and you will participate in classes that produce student-led professional products: a community-based digital publication, a live news and current affairs radio show and a video magazine featuring short documentaries. A rotating menu of journalism electives is offered each year, from podcasting to conflict reporting to long-form writing.

Bachelor of Journalism with a concentration in Health Sciences
In partnership with the Faculty of Science, Carleton offers a Bachelor of Journalism with a concentration in Health Sciences. This collaboration, unique in Canada, allows you to explore journalism and science—an increasingly relevant combination in a world driven by public expectations for clarity in health science and the policies that govern it.

Bachelor of Journalism and Humanities
For those who wish to gain an understanding of world culture and history while studying journalism, Carleton offers a Bachelor of Journalism and Humanities degree. In this program, you’ll spend nearly half the time studying core journalism, and the rest studying subjects such as art history, classics, literature and philosophy. For details, visit carleton.ca/bhum.

Distinguished faculty
Our professors and instructors are among the finest journalists in Canada. They’ve distinguished themselves as writers, reporters, news editors, commentators, producers, foreign correspondents and bureau chiefs in media organizations across the country, including the CBC, The Globe and Mail, iPolitics and the Toronto Star. We also have instructors with extensive experience and success in freelance journalism. The School has an extensive network of working journalists who share their professional expertise with our students as sessional instructors or guest lecturers. All bring invaluable knowledge of the rapidly changing world of journalism into the classroom. Working closely with our full-time faculty and these professionals, you will gain hands-on experience in our state-of-the-art digital newsrooms, broadcast studios and seminar rooms.

Gain practical experience
The professional apprenticeships we offer during the academic year allow you to put your skills to practical use in news organizations, public relations and communications firms, or NGOs across Canada. Summer internships and full-time jobs are also available through the media organizations that recruit our best and brightest every year.

The capital advantage
Ottawa is a major media hub. Because it is home to those who generate news and information—members of the federal government, national NGOs, embassies, arts and culture groups, and business and high-tech communities—many national media outlets, staffed by some of the country’s leading journalists, have bases in the city, including:

- CBC (television, radio and digital)
- CTV
- Global TV
- The Canadian Press
- CPAC
- The Globe and Mail
- National Post
- Toronto Star
- Canadian Geographic
- The Hill Times
- iPolitics
- The Tyee
- Vice
- HuffPost
- rabble.ca

These organizations often offer internships as well as career opportunities to our students.

Internships abroad
Over the years, our Journalism students have participated in the Global Journalism internship program run by the Centre for Media and Transitional Societies (CMTS) in partnership with Students Without Borders and Uniterra. Initially established in Rwanda, where the media sector was decimated by the 1994 genocide, the program has evolved and expanded to include placements in Africa, Latin America and Asia. Each summer, our students apply to intern with media and development organizations in the Global South.

Careers
Graduates of our program are employed at all levels of the media industry in Canada and abroad, as well as in the public relations and communications sectors. Given its high level of professional training combined with academic rigour and breadth, our Bachelor of Journalism degree is also recognized as being a valuable stepping-stone to a variety of other career options. Many of our graduates have become authors, lawyers, doctors, teachers, advertising executives, diplomats, academics and public servants.

Prominent alumni
Many of the people who report the news—on television and radio, in daily newspapers and magazines—got their start at Carleton in the School’s Bachelor of Journalism or Master of Journalism program. Along with those mentioned above, our alumni include:

- Nahlah Ayed, foreign correspondent and host of Ideas, CBC
- Vanessa Lee, correspondent, CTV National News
- Samia Madwar, Managing Editor, The Walrus
- Nelofer Pazira, author, filmmaker, journalist
- Rosemary Barton, chief political correspondent, CBC
- Jen Copstake, reporter/producer, BBC, London
- Geoffrey York, Africa Bureau Chief, The Globe and Mail
- Rita Celli, host of Ontario Today, CBC
- Andrew Nichols, anchor, CBC News Network

These are just a few of the hundreds of reporters, editors and media executives whose journalism training at Carleton has led to careers that literally span the globe. For the latest news on faculty, students and graduates, visit the school’s website at carleton.ca/journalism.
Mathematics and statistics are the driving forces behind many of today’s advancements in medicine, economics, business, science and technology. As a Bachelor of Mathematics (BMath) student, you can choose from a broad range of program options according to your interests and career goals. The skills gained from our programs will provide you with a competitive edge in many careers and prepare you to contribute to the next generation of innovations.

**Programs of study**

The BMath degree offers three Honours programs:
- Mathematics
- Statistics
- Computational and Applied Mathematics and Statistics

Alternatively, you can choose a Combined Honours program such as Computer Science and Mathematics, Economics and Mathematics, or Economics and Statistics. No matter which area of study you choose, our programs ensure that you master traditional mathematical or statistical analysis. You will have opportunities to learn modern mathematical or statistical techniques and use advanced computer software. Our programs also provide training on emerging methods such as artificial intelligence and data mining.
“The Mathematics and Physics program has been the best undergraduate experience I could have asked for. It has allowed me to determine which of the two subjects I wanted to study further, and has provided me with a deeper understanding of the interplay between math and physics. The caring and approachable professors, and the tight-knit student community, ensure that everyone in the program is able to do well. During my time at Carleton, I’ve been given the opportunity to work on particle physics experiments in affiliated labs around the world.”

Gareth Smith, student in Mathematics and Physics

Mathematics
Mathematical knowledge is critical to innovation across diverse fields, and this knowledge is applied in professions such as economics, business, cryptography, and security and science. Built around a strong core of traditional mathematics, Carleton’s program allows you to branch into many areas of modern mathematics and become skilled with a variety of applications. Students may choose to pursue a concentration in Stochastics or combined programs with Physics or Economics. Computer Science courses may be included as options to broaden your skillset. A minor in Mathematics is also offered.

Statistics
Statistics is the science of extracting useful information in the face of uncertain data, quantifying risk and producing evidence-based decisions. As a statistician, you will plan data collection methods, analyze data and advise on the interpretation and limitations of results. Statisticians and Data Scientists have many career possibilities in a wide variety of organizations. Our Statistics program has been designed to provide you with the tools you will need for managing and analyzing data. The Honours Statistics program also includes an introduction to the theoretical dimension of statistics required for advanced studies and offers a concentration in Actuarial Science. A minor in Statistics is also offered.

Actuarial Science concentration
This concentration provides a targeted sequence of courses in Mathematics, Statistics, Actuarial Science, Business and Economics so that students meet all three undergraduate Validation by Educational Experience (VEE) course requirements and have the background to write three undergraduate level exams set out by the Society of Actuaries (SoA) for professional designation.

Computational and Applied Mathematics and Statistics
In this program, you will acquire the knowledge and skills you need to pursue careers involving the design of computers and computer networks as well as the application of computers in solving critical problems in business, government and science. For example, you might find yourself developing new ways to protect information from both improper access and corruption during transmission, helping managers in business and government to allocate resources optimally, or using computer networks to study traffic flow and optimal routing. The Computational and Applied Mathematics and Statistics program is offered as an Honours program with a choice of three concentrations:
- Applied Analysis
- Applied Statistics and Probability
- Discrete Mathematics

Concentrations
Concentrations are a great way to customize your academic experience, with several options available for students to pursue interests outside their major. These opportunities complement training in mathematics and statistics and are described in detail at carleton.ca/math.

Four years, two degrees
Carleton also offers an elite BMath/MSc fast-track program in which high-achieving students can complete a bachelor’s and a master’s degree in four years rather than the six years it would normally take to obtain both of these degrees.

Combined Honours programs
The Combined Honours programs incorporate courses in Mathematics and Statistics with those from other disciplines such as Economics, Computer Science and Physics. You can pursue a Bachelor of Science (Double Honours) in Mathematics and Physics, or choose one of the following Combined Honours within the Bachelor of Mathematics programs:
- Computer Science and Mathematics
- Economics and Mathematics
- Economics and Statistics

Careers
Professional mathematicians have many career options including:
- actuarial science
- business and financial modelling
- clinical trials
- data analysis
- environmental and climate modelling
- epidemiological modelling
- information security
- investment analysis
- market analysis
- networks and systems analysis
- survey design
The Bachelor of Media Production and Design (BMPD) will teach you to operate across all facets of narratives—designing, programming and telling non-fiction stories online. You will learn to engage, inform, entertain and ultimately contribute to a broader and deeper understanding of how we connect with each other to build stronger societies.

Program of study
A combination of intensive hands-on workshops and lecture courses gives you a strong foundation in writing and narrative abilities across digital media formats, such as text, photography, 360 video, graphics, augmented reality as well as skills in computer programming, data management and research. The classroom experience will build fundamental programming and online design skills and thinking into the development and application of narratives, with the understanding that design shapes how and what information is delivered to audiences, making “story” and “design” inseparable.

As well as acquiring editorial, design and programming skills, you will develop the theoretical knowledge and understanding of the power of a story. You will take courses in ethics, law, civic institutions and citizen interactions via policy, data and information technology theory, and the history of persuasive narration and imagery. You will learn how to combine storytelling skills traditionally taught to journalists with hands-on design and computer programming skills from information technology courses, exploring where the two intersect to engage audiences in distinctive ways.

You will receive much of your instruction in small class sections of no more than 30 students with abundant opportunities for hands-on work and constant feedback, especially in the early years of your program. As you progress from year to year, developing your expertise in those core program elements, your coursework will be augmented by instruction delivered in larger lecture-size courses in subject areas such as ethics and digital media law, as well as in emerging media industries and practical aspects such as freelancing.

Co-op employment
You can choose a co-op option, working for 12 months after the fall term of your third year, before completing the final three terms of your degree. Placements are arranged through Carleton’s Co-operative Education Office with media companies, online design and production houses, not-for-profit and non-governmental organizations, corporations and governments both in Ottawa and across the country.

Careers
BMPD graduates will apply creative production and design thinking to information strategies and narratives that help empower citizens, strengthen communities and help organizations of all sorts tell their stories online. Graduates will be prepared for careers such as:
- data analysts/conceptualizers
- digital communications experts
- information-based producers/designers of online content for not-for-profits, NGOs, corporations and governments, museums, research institutes
- media producers of online content for mainstream and new digital media

With your BMPD degree, you will also be prepared to pursue studies in master’s programs such as Journalism or Digital Media.
Whether your interests are in performing, studying the intersections of music and culture, or sharing the joys of music through teaching, Carleton’s Bachelor of Music (BMus) will prepare you to achieve your goals.

Program of study
Carleton’s BMus program provides a solid grounding in the study of a wide variety of musical instruments and traditions. While developing a strong background in performance, composition and analysis, students can choose between a range of musical styles including jazz, classical music, singer-songwriter, electronic and computer music, Celtic and world music, and popular music, among others. Even as you specialize in one area, you benefit from an overall environment of diversity. Students also have the opportunity to develop strong critical thinking skills through the exploration of intellectual and applied perspectives such as community music practice, ethnomusicology, Canadian music studies, improvisation studies, disability studies, Indigenous studies, critical theory (including areas such as gender, ethnicity and class), and historical musicology.

Practicum placements provide opportunities for students to gain valuable experience in various arts, education and media organizations. We also offer a wide range of ensembles including choir, chamber music, guitar, roots, jazz, jazz-rock fusion, music theatre, opera, African drumming, the Carleton-Ottawa Symphony Orchestra chamber ensemble and more. In addition, Carleton is the only university in Canada to offer a performance diploma in Carillon Studies. A degree in Music from Carleton provides a broad—yet thorough—education, giving graduates a competitive advantage in today’s job market. Admission to the program is by audition, and applicants may do so on any instrument (or voice) used in classical, jazz, traditional or popular music.

Other programs
Our Bachelor of Arts program in Music focuses on music as a historical and social phenomenon. A minor in Music is also offered.

Careers
Bachelor of Music graduates can be found in careers such as:

- archival and library positions
- arts administration civil service
- composing and songwriting
- law
- music criticism
- music therapy
- performing in bands, orchestras and ensembles
- teaching music in public and private educational environments
- the entertainment industry: music production, film production and broadcasting

Resources
Carleton offers a wealth of performance, research and study resources, such as:

- a world-class downtown performance facility at the Carleton Dominion-Chalmers Centre;
- the Carleton-Ottawa Symphony Orchestra Ensemble in Residence;
- a computer music production studio;
- the largest collection of Canadian musical scores outside of the Canadian Music Centre;
- an Artist-in-Residence program featuring national and international artists;
- the Jacob Siskind Music Resource Centre; and
- an extensive collection of recordings, including the Jacob Siskind Collection, the Jacques Emond jazz collection (3000+ vinyl recordings), and the Trevor Tolley Collection (7000+ jazz recordings)
Public Affairs and Policy Management

carleton.ca/bpapm | Co-op available

Public policies fundamentally affect our lives. Improving our society and our institutions requires an understanding of the policies that govern them. Carleton’s Bachelor of Public Affairs and Policy Management (BPAPM) degree prepares you to be effective in designing, implementing and evaluating public policies.

Program of study

The COVID-19 pandemic has shown the importance of public policy in our society. Public policy affects the extent of our exposure to illness, our access to a vaccine and the nature of our economic recovery. Public policy also affects our prosperity and the extent of poverty as well as our access to education and medical care. It shapes the impact and pace of technological change. It determines the duties and powers of our officials at home and overseas, and the reach and practical meaning of our rights.

As a BPAPM student, you will examine a wide variety of issues facing society today and develop the necessary skills and knowledge to address them. The program does this through a curriculum that combines interdisciplinary study of public institutions and processes with rigorous study of public policy. A selection of courses in political science, economics, law, communications and history is combined with exclusive core courses in public policy. Together, these courses will provide you with a comprehensive understanding of what government, civil and business organizations do,
why they do it, and how they might do it better.

**Specializations**

After your first year in the program, you will begin to focus your studies by selecting one of four specializations, each offering different policy streams, with a total of nine policy areas to choose from.

**Communication and Policy Studies**

In collaboration with Carleton’s School of Journalism and Communication, this specialization enables you to pursue a policy concentration in Communication Technologies and Regulation or Strategic Public Opinion. Examine topics such as broadcasting, telecommunications, internet and information systems, or strategic communication, polling and opinion research, political campaigns and market intelligence.

**Development Policy Studies**

This specialization enables you to explore the policies that are designed to improve conditions in the Global South or disadvantaged communities in Canada. Choose a concentration in Rights and Human Development or Global Economic Relations.

**International Policy Studies**

In collaboration with Carleton’s Norman Paterson School of International Affairs graduate program, this specialization enables you to examine the international issues and policy challenges facing states and international institutions. Concentrations are available in International Relations and Conflict, and Security and Intelligence.

**Public Policy and Administration**

In collaboration with Carleton’s School of Public Policy and Administration, this specialization provides a comprehensive understanding of pressing public issues of concern to Canadian governments and NGOs and develops related analytical and managerial public policy skills. Choose from three concentrations: Social Policy, Economic Policy or Environmental and Sustainable Energy policy.

**Academic home and the capital advantage**

The BPAPM degree is a unique undergraduate degree that draws directly from Carleton University’s research and professional strengths in the study of public administration, international affairs, political studies and journalism. It takes advantage of the university’s location in Ottawa, the national capital, home of the federal government, foreign embassies and many international organizations. The program is located in the Arthur Kroeger College of Public Affairs, which provides an academic home for our students who come from across Canada and abroad. BPAPM students have access to their own academic advisor, as well as a dedicated student meeting space.

**Student mentors and student society**

An example of the program’s collegial atmosphere is our mentorship program. First-year students are matched with a volunteer third or fourth-year student from within the College. Available to answer questions, offer advice and share experiences, these upper-year mentors are eager to help ease your transition from high school and introduce you to the program, the College and university life in general. The Arthur Kroeger College Educational Student Society (AKCESS) organizes a variety of informal professional and social events that give students an opportunity to explore public policy outside the classroom.

**Study abroad**

With an average of B or better after first year, you can apply for a student exchange. This involves spending one or two terms studying public affairs at one of Carleton’s partner institutions around the world.

**Co-op and internships**

Ottawa provides an unparalleled range of practical policy-related co-op opportunities with governmental and non-governmental organizations.

**Kroeger Policy Connect**

In the first year of the program, students have the option to take Kroeger Policy Connect—an intensive learning experience in the winter term. It provides a glimpse into the world of policy practice and includes visits to a wide range of organizations that do policy work in the Ottawa area.

**Careers**

BPAPM graduates go on to work around the world for a wide range of public and private sector organizations. Our alumni also excel in graduate and professional studies in public administration, international affairs, politics and law.

“...the House of Commons Page Program is a one-of-a-kind opportunity that provides unique insights into the political world. It brings together young people from across the country with a wide variety of backgrounds to work together to serve in the House of Commons. Working as a Page has widened my worldview, made me more passionate about politics, and has allowed me to experience politics right on the floor of the House. It has been an amazing opportunity that I enjoyed every step of the way.”

Jinian Beharrell,
Bachelor of Public Affairs and Policy Management student

To learn more visit carleton.ca/parliamentarypages.
At Carleton, we pride ourselves on being leaders in scientific discovery, innovation and education. The Bachelor of Science (BSc) offers a collegial learning environment where you will be taught by professors recognized for both their scientific research and teaching excellence. They will provide you with plenty of opportunities to gain practical, hands-on experience.

**Program of study**
Experimenting is a key component of learning science at Carleton. In first year, your classes will typically have a lecture and a lab or tutorial component. Each lab will take three hours per week, so if you choose three of these lab courses you could have nine hours of hands-on experimentation every week.

Our labs, tutorials, field courses and seminars are conducted in small classes, resulting in plenty of personalized interactions with professors, lab supervisors and fellow students.

**First-year seminars**
First-year science students are encouraged to enrol in our unique seminar course, *Seminar in Science*, designed specifically to introduce you to the latest scientific issues and to help you develop the kind of communication, analytical thinking and research skills you will need for your science studies and your career.

**Research opportunities**
Many of our professors are actively involved...
in groundbreaking research in their areas of expertise, and you could find yourself working on some of these projects. Carleton faculty have also forged strong links with Ottawa-based industries, government labs and departments, as well as teaching and research hospitals, providing Carleton students with a diverse range of research and employment opportunities.

**The Carleton advantage**
In addition to offering a great city and a beautiful campus in which to live and study, Carleton offers an impressive array of additional benefits.

Located right on campus, the National Wildlife Research Centre is the national headquarters for a network of wildlife researchers from around the world. Government scientists, faculty researchers and students benefit from close collaboration on a number of shared projects.

The National Research Council (NRC), the Government of Canada’s premier organization for research and development, is headquartered in Ottawa.

Summer Research Internships are available to eligible students once they have completed their first year of studies. These internships give students the opportunity to work in a research group headed by a Carleton professor.

The Science Student Success Centre was created to address the needs of science students. Students, faculty and staff from the centre meet one-on-one with students to get to know them and help them draft an individual study plan. They help students succeed academically by advising them on how to manage their workload, take good notes and study for exams and tests. They also act as ongoing resources and mentors to help students reach their academic goals.

**Applied Physics**
See Physics.

**Biochemistry**
The science of biochemistry seeks to understand the molecular basis of life by investigating enzyme reactions, mechanisms of gene regulation, signaling pathways and cell structure at the molecular level. Biochemists study how animals, plants and microorganisms use energy to grow, compete with other organisms and reproduce. Many of the biochemists’ findings are of direct relevance to humanity—they help us understand and treat disease, improve food production and find new techniques to produce valuable products such as vitamins and antibiotics. Biochemistry programs include experiential learning opportunities that provide excellent training options for entry into medicine and other health sciences professional programs.

Programs in Computational Biochemistry and in Biochemistry and Biotechnology are also offered.

**Career paths:** environmental toxicology consulting; medical research technology; medicine and dentistry; patent application and review; pharmaceutical sciences; regulatory toxicology; science policy analysis; teaching and instructional innovation; technical sales and marketing; veterinary medicine

**Bioinformatics**
Modern biology in the post-genomic age is being greatly enriched by the infusion of ideas and tools from computer science, data science, mathematics and statistics. Bioinformatics taps into the vast datasets accumulating in the life sciences, combining techniques from data and computer science to solve biological questions, such as gene identification, protein structure, drug interactions and epidemiology. At Carleton, you will take courses in several areas including bioinformatics, biology, biochemistry and computer science.

**Career paths:** big data analyses in the medical, environmental and agricultural sectors; biodiversity monitoring; biostatistics; database design; disease diagnostics; drug discovery

**Biology**
Biology in the twenty-first century is among the most diverse and exciting of the sciences. Many of the challenges we face as a society, from the development of novel health therapies and diagnostics to climate change and conservation, involve biological solutions. As a Carleton Biology student, you will gain broad experience through core science courses and options that suit your individual interests and needs. The Biology department offers BS and BA degrees, a program in Biology and Biotechnology, and several interdisciplinary joint programs with other science departments and with the College of the Humanities. Our department believes in the value of experiential learning and students in the BS programs in Biology have extensive opportunities to learn in lab-based environments. Students may choose to specialize in one of five concentrations: Biodiversity, Natural History and Conservation Science; Ecology, Evolution and Behaviour; Health Science; Molecular and Cellular Biology; or Physiology.

**Career paths:** agriculture and horticulture sciences; bioethics; biotechnology; education and academia; environmental consulting; forensics; genomics; government agencies; intellectual property; medicine and health sciences; science policy and regulation; wildlife management

**Biotechnology**
Biotechnology applies the principles of biochemistry and biology to the study and manipulation of living organisms for industrial, medical, agricultural and environmental applications. Some areas of biotechnology include genetic engineering, personalized medicine, drug discovery and development, applied microbiology and fermentation techniques, and biological control of insect pests. In the Ottawa area, local companies and government agencies are involved in projects such as biofuel production from agricultural waste, the development of medical diagnostic screening devices, and the development of new anti-cancer and antimicrobial therapies—in other words, biotechnological solutions to real-world problems. The extensive laboratory training provided in this program will give you the experience needed to work in a laboratory environment. Biotechnology is offered as a specialized program in conjunction with Biology or Biochemistry.

**Career paths:** agriculture; bioethics; biomedic product development; food industries; forensics; government lab research; industrial research and development; medical research; patent law; pharmacy; science writing and broadcasting; technical sales and marketing

**Chemistry**
Chemistry is a fundamental science that helps us understand the building blocks of matter and life. Chemists work to discover new materials and processes that can improve our lives. As a student interested in chemistry, you can enrol in programs and courses in all the main areas of chemistry, including analytical, inorganic, organic, physical, theoretical and environmental chemistry. Concentrations in Nanotechnology and Chemical Toxicology are available. Extensive lab experience is offered, helping you to round out your studies with practical experience.

**Career paths:** environmental and health policy; government and academia; law; pharmaceutical and industrial chemists; pharmacy, dentistry and medicine; pollution control; research and development

**Computational Biochemistry**
The modern era of biochemistry has been transformed by the recent development of technologies that can generate vast amounts of information about entire genomes, proteomes or metabolomes. One of our biggest challenges in biochemistry is the development of tools to analyze and manage this flood of data.

The Computational Biochemistry program was developed to provide both training in computer science and a solid foundation in biochemistry. Students are exposed to the core areas of biology and chemistry, including genetics, cell biology, organic chemistry and analytical chemistry, as well as general and experimental biochemistry, bioinformatics and molecular modelling. Optional courses allow you to focus on areas such as molecular genetics, pharmaceutical drug design, functional genomics and protein structure and function.

**Career paths:** biomedical and genetic data analysis; biomedical data management; biomedical research and development; biotechnology research and development; combinatorial drug and enzyme design; forensic sciences and data analysis; pharmaceutical
research; science communications; technical sales for biotechnology companies

Earth Sciences
The Earth Sciences program at Carleton offers you the opportunity to study the Earth’s systems, incorporating knowledge from other sciences including physics, biology and chemistry. You will learn about processes (such as evolution, earthquakes, volcanic eruptions, plate tectonics and mountain building, and the formation of hydrocarbon reservoirs and mineral deposits) influential in the Earth’s geologic past that establish our present and future global development. The program offers the opportunity to participate in hands-on field courses that can take you to sites throughout Ontario, across Canada and around the world. Students may enrol in concentrations such as Finance: Resource Valuation; Geophysics; Resource Economics; or Vertebrate Paleontology and Paleocology; or in Combined programs with Biology, Chemistry or Physical Geography that provide a broader understanding of fields related to Earth Sciences. Graduates are eligible to apply for Professional Geoscientist registration in Canada—an important designation in the job market. Some Earth Sciences students may be interested in taking a minor in Business or Geomatics.

Career paths: natural resources exploration; research and technical positions in government, industry or university laboratories; resource and investment valuation in business; water resources, environmental assessment or remediation

Environmental Science
The Environmental Science program brings together the study of biology, chemistry, earth sciences and geography to enable its graduates to address complex, multidisciplinary, environmental and conservation problems. Through lectures, field courses and hands-on laboratory work, students become proficient in topics such as aquatic ecology, fish and wildlife conservation, groundwater protection and remediation, sustainable resource extraction, and environmental monitoring and policy. In upper years, students specialize in chosen areas of study and conduct research and thesis projects, working in teams and individually on current problems facing environmental science. Concentrations are available in Ecology, Biodiversity and Conservation; Chemistry; and Earth Sciences.

The Environmental Science Honours program is accredited by ECO Canada (eco.ca), allowing our graduates to register as Environmental Professionals (EP) through this organization. In addition, the Earth Sciences concentration
Food Science
The field of food science integrates science, law and economics knowledge to meet food industry and government standards to ensure the safety and quality of foods. Students in this program work within this framework to develop efficient skills to analyze, process, pack, preserve and distribute safe foods.

Food Science at Carleton is a unique and broad-based interdisciplinary program. Built on a strong science base, the program emphasizes the analysis of food in the context of food regulations. Ultimately, these elements are used to assess risk and evaluate food safety policies in the context of Canada's dynamic food industry. The modern job market for food professionals demands people who have technical skills as well as an understanding of regulatory and socioeconomic issues relating to the food/ agriculture sector. People with both sets of skills are in demand by all levels of government and by the private sector.

Career paths: analytical food chemists; food product developers; food safety specialists; microbiologists; policy analysts; quality assurance managers; research and development scientists; food safety specialists; food technologists; regulatory and compliance officers; research and development managers; regulatory and policy advisors; and quality assurance managers.


disciplines including computer sciences. students in Neuroscience

“During my time in the Neuroscience program, I worked with some amazing graduate students investigating potential therapeutics for Parkinson’s disease. They became some of my greatest mentors and friends. I continued in this lab through another internal research opportunity at Carleton, and learned a lot about overcoming obstacles in research. From there, I discovered my passion for cellular and molecular biology, and ultimately flourished as a scientist.”

Elyn Rowe, student in Neuroscience

Career paths: education; environmental consulting; environmental restoration; federal, provincial and municipal government environmental departments; natural resource management; scientific research in academic, government or private sectors; sustainability and environmental policy analysis; wildlife and habitat conservation

Geomatics
Geomatics deals with the acquisition, management, analysis and display of geographic information for societal and environmental problem-solving. In our BSc in Geomatics program, you will obtain intensive science-based training in geographic information systems (GIS), remote sensing (e.g. imaging from satellites and aircraft), Global Positioning Systems (GPS), and land surveying and cartography, including desktop, web-based and mobile applications. You will apply advanced computer software and techniques to improve understanding and management of the Earth’s physical and natural systems.

Some examples of Geomatics application areas include urban planning and transportation analysis (e.g. infrastructure management, business analysis and sustainability planning), ecosystem and environmental resource management (e.g. forestry, agriculture, water resources) and public health and security (e.g. hazard mapping, disease spread, crime analysis). Tools of the trade include specialized computer software (e.g. Google Earth, ESRI ArcGIS software, open-source GIS and database management systems) and hardware (e.g. GIS workstations, GPS technology, camera systems, drones, smartphones and other mobile platforms).

Our program combines hands-on learning using modern laboratory facilities with opportunities to gain field experience and participate in work placements. The BSc in Geomatics includes training and course electives in relevant physical or natural science disciplines including computer sciences.

Career paths: seminars; environmental consulting; environmental impact assessment; GIS analysis and consulting; land surveying; natural resource management; remote-sensing and image analysis; web mapping including design and programming

Interdisciplinary Science and Practice
The BSc in Interdisciplinary Science and Practice integrates concepts from different scientific disciplines and other forms of knowledge and applies them to real-world problems through local and global perspectives. This innovative program builds on traditional science disciplines and incorporates data science, policy, public science and science communication through experiential learning and addressing current and relevant issues.

Students complete eight interdisciplinary science courses and one minor within the Faculty of Science, which ensures students have a demonstrated depth of knowledge in a scientific field that is recognized on their degree. Students are encouraged to complete a second minor, which they can select from within or outside the Faculty of Science. All students participate in an academic capstone experience such as a group research project, individual research project or research essay that involves interactions with outside organizations such as federal government agencies and non-governmental organizations.

Program graduates will be well prepared to balance specialized technical knowledge with the transferable skills of critical thinking and problem solving, science communication and teamwork.

Career paths: consulting agencies; data scientists; knowledge brokers; high-tech industries; non-profit organizations and NGOs; medical and healthcare industries; research organizations; science communicators; various science advice positions in government agencies

Linguistics
Linguistics is the scientific study of one of the most fundamental aspects of being human: using language to communicate. Linguists explore a range of fascinating areas including how language is represented and processed in the brain, the role of language in human-computer interfaces and artificial intelligence, clinical applications of linguistics in treating language disorders and delays, how children acquire language, the psychology of language, and the biological and evolutionary aspects of language.

In Carleton's BSc in Linguistics, students tailor their degree to their interests by pairing one of two concentrations—Linguistic Theory...
or Psycholinguistics and Communication Disorders—with one of three focuses—Computer Science, Neuroscience or Psychology. Qualified students in the Psycholinguistics and Communication Disorders concentration have the opportunity to take a practicum course that provides clinical experience in speech-language pathology.

Linguistics can also be taken as a Bachelor of Arts.

**Career paths:** artificial intelligence; forensic linguistics; human-computer interfacing; language documentation; natural language processing; second language learning technology; speech recognition; speech-language pathology; translation and interpretation

### Nanoscience

Nanoscience is concerned with the study of matter at a scale on the order of 10 to thousands of atoms. At Carleton, you will examine nanoscience through the disciplines of physical chemistry and electrical engineering to understand the physical, chemical and electronic characteristics of matter in this size regime. The combination of these two areas of study will equip you to fully understand nanoscience in photonics, electronic, energy and communication technologies. The focus of the program will be on materials—their use in electronic devices, their scalability and the control of their properties. Further required courses in mathematics, physics and statistics will round out the program, and advanced courses in bionanoscience and nanoelectronics are available.

A concentration in Nanotechnology is also available within the Chemistry program.

**Career paths:** biomedical technology; micro (nano) electronics; research and development in aerospace technologies; research and development in green technologies; sensors and communications technology; solar cell technology

### Neuroscience and Biology/
**Neuroscience and Mental Health**

Neuroscience is a modern, exciting and rapidly-expanding scientific discipline that aims to understand the brain and nervous system and how these systems create complex functions including behaviour, sensation, memory, emotion, thought and consciousness. This multidisciplinary field explores how changes to the nervous system can result in neurological disease, mental health problems and more. Faculty and students in Carleton’s Neuroscience department are particularly interested in vulnerability and resilience to depression and other stress-related psychiatric diseases, neurodegeneration and neurological disorders, regulation and dysregulation of feeding and metabolism, the impacts of trauma on the brain and how changes in brain development can lead to disease. To better understand brain function, our research and programs investigate everything from molecules to cells and brain circuits, from brain regions to whole organisms. We use multidisciplinary approaches to integrate information from other scientific disciplines including medicine, molecular biology, psychology, immunology, genetics, chemistry and epidemiology.

The Department of Neuroscience’s state-of-the-art research and teaching labs are housed in Carleton’s new Health Sciences Building. The B.Sc. in Neuroscience and Mental Health is Canada’s first undergraduate degree program to be run by a Neuroscience department and offers considerable flexibility for student course selection. This means students can tailor their courses according to their interests, including the opportunity to pursue a wide range of minors. Our B.Sc. in Neuroscience and Biology (Combined Honours) program is also available for students wanting more emphasis on advanced biology and laboratory-based courses.

**Career paths:** clinical researcher; counsellor; knowledge mobilization and translation; life/health-science researcher; medicine; mental health worker; nursing; occupational therapist; pharmacist; physiotherapist; psychiatrist; psychologist; science journalism; science policy; speech pathologist; veterinary medicine

### Physical Geography

Physical Geography is the science of the natural environment at all scales, from the smallest grain of sand to the entire planet, emphasizing an understanding of the complex interactions among Earth’s four major spheres: the atmosphere, the hydrosphere (water in all its forms), the biosphere (all living things) and the lithosphere (the solid earth). Physical geographers analyze and manage human-environment interactions and impacts through interdisciplinary and spatially-explicit approaches that integrate elements from traditional scientific disciplines such as biology, chemistry, mathematics and physics with applied environmental disciplines such as geology, soil science, hydrology, meteorology and ecology.

In the BSc in Physical Geography program, you can choose from a wide range of courses that cover topics such as climate change, water resource analysis, natural resource management, ecosystem science, quantitative methods using geographic information systems (GIS) and remote sensing, statistical analysis and environmental models. Both fieldwork and laboratory techniques are emphasized. A Bachelor of Arts in Geography with a concentration in Physical Geography is also available.

**Career paths:** environmental consulting; environmental technician; geoscientist; natural hazards analyst; natural resource management; water resource monitoring

### Physics and Applied Physics

Physicists are passionate about studying nature at its most fundamental level to explain observed natural phenomena, as well as to predict and search for new phenomena not yet observed. Applied physicists seek to employ our physical understanding of nature to solve practical problems. At Carleton University, you can study Physics as your Honours subject (with Astrophysics, Experimental or Theory streams) or in combination with Biology, Chemistry or Mathematics. Double Honours Mathematics and Physics is a program for theoretically-inclined students. Our Applied Physics (Honours) program combines studies in modern physics, optics and electronics, mathematics and computer science. The Department of Physics also collaborates with the Department of Electronics in offering a professionally-accredited Engineering Physics (BEng) program. Physics researchers at Carleton are engaged in subatomic physics as well as in medical physics.

**Career paths:** advanced studies in specialized physics, such as particle physics, medical physics and astrophysics; applied research and development of new technologies in the physical sciences; data science applications to artificial intelligence, finance, social media and more; employment in industry; health care, including medical imaging and radiotherapy; instrumentation in natural resource industries; nuclear and sustainable energy industries; science journalism; scientific policy-making; teaching

### Psychology

Psychologists study the mechanisms that underlie our thoughts, emotions and behaviours. They examine a diverse range of topics, such as how we think and learn, how we interact with others, and how we can promote healthy development and wellness. This is accomplished by conducting research so that the knowledge gained can help us to better understand the human mind, enhance well-being and performance, and generate additional research questions.

All of our programs provide opportunities to explore psychology’s major areas within the context of an active and diverse research environment. For students wishing to focus on one of these major areas, we offer concentrations in Cognitive Psychology, Developmental Psychology, Forensic Psychology, Health Psychology, Organizational Psychology and Social/Personality Psychology. We also offer a stream in Mental Health and Well-Being.

The insights you will gain from studying psychology will serve you throughout your life, in virtually any career.

**Career paths:** corrections, probation or parole counselling; early childhood education; health and social services; human resource management; marketing and public relations; mental health services; research

CARLETON UNIVERSITY
Vision, energy and a commitment to social justice, social action and working with people—these are some of the qualities that are required of contemporary social workers. Through a rigorous program of study that emphasizes theory, critical analysis, research, skill development and experiential learning, Carleton’s School of Social Work will prepare you to meet the challenges of this dynamic profession.

Program of study

Carleton’s Bachelor of Social Work (BSW) is a degree that places strong emphasis on the interactions between people and their environments. We look for innovative ways to join with people to assist them in bringing about individual and social change. Our program is ideal for students who enjoy working with diverse populations and who have strong interests in promoting social justice. The program is designed to equip you with the knowledge and skills necessary for working sensitively and effectively with individuals, groups and communities, for critically analyzing social policies and programs, and working towards a more equitable and just world.

The BSW program is designed to give students an education in both the liberal arts and professional social work. In the first year, you will take a range of courses outside of social work along with two social work courses that introduce you to the profession of social work and the programs and policies of the Canadian state. In the next three years, you will be introduced to the theoretical frameworks of social work. This includes combining theory and practice to become a social work practitioner. You will learn principles and theories for direct intervention with individuals, families, small groups and communities. You will look at social work practice as shaped by oppressive, systemic relations. You will learn about being a social worker if you are a member of an Indigenous community, a person
with a disability, an immigrant, or refugee, or if you are a member of an 2SLGBTQ+ community. If you aren't a member of any of these communities, you will also learn about their experiences and how to work effectively across different communities. You will also explore the history and theories of the state and cover topics such as the nature of the labour market, changing family structures, ageing, the voluntary sector and research methodologies.

You will study how social services and the state are administered and managed, learn about working in community and human service organizations, and have the opportunity to refine your analytic and interpersonal skills. There are two field practica, one in the third year and another in the fourth year. They provide opportunities to put theory into practice, and are offered in such settings as: child protection and children’s services; community health centres; women’s health and crisis centres; probation, parole and prison services; federal government departments; and a range of international and non-governmental organizations.

A pioneer in social work
Nationally and internationally renowned for its commitment to social justice, equality and respect for all peoples in society, the School of Social Work is a pioneer of the “structural approach” to social work.

Drawing on a range of theories that emerged from the structural approach, you will examine the relationship between personal troubles, problems and difficulties, and broader social, economic and political inequities in society. You will learn to connect the circumstances of individuals to economic, political and ideological structures. Carleton-educated social workers can work effectively with individuals, families and communities and for social justice because they recognize the fundamental interconnections between social structures and peoples’ lives.

A strong student society
The BSW Student Society (BSWSS) brings students together and provides an opportunity for BSW students to discuss student issues. The BSWSS arranges many events, such as workshops, seminars and social gatherings.

Community spirit
The School of Social Work is an integral part of the social welfare community in Ottawa and we are active nationally and internationally. Our professors enjoy strong, collegial relations with a diverse range of people across community organizations. For example, individual faculty members play major roles in Canada Without Poverty (which supports a national coalition for the elimination of child poverty); YouthREX (research in grassroots youth organizations); and Connecting on Disability and Abuse (a sub-committee of Crime Prevention Ottawa).

The capital advantage
The opportunity to study in the nation's capital provides students with exceptional off-campus learning opportunities. The Canadian parliament, federal departments and national think tanks are located in Ottawa. The offices of Canada Without Poverty, the Canadian Association of Social Workers (CASW) and the Canadian Association for Social Work Education (CASWE) are also located in Ottawa.

The headquarters of many trade unions and non-governmental organizations providing services and support internationally (Oxfam Canada, CUSO International, the Canadian Council for International Co-operation) provide a broad range of learning opportunities for our students.

Careers
As a graduate with a Bachelor of Social Work, you will be eligible to join the Ontario College of Social Workers and Social Service Workers (OCSWSSW) and receive the designation of Registered Social Worker.

With a Carleton BSW, you will be able to apply your knowledge and expertise in many areas:

- child welfare and youth services
- correctional services
- counselling and advocacy
- family and health services
- housing and supportive living
- immigration and refugee settlement services
- rehabilitation services
- services for Indigenous peoples
- services for seniors
- social assistance and other related government services
- women’s shelters

The School of Social Work is accredited by the Canadian Association for Social Work Education (CASWE). The CASWE accreditation review in 2012 gave the Carleton BSW the highest standing.
Building your degree

In many of Carleton’s programs, you can add degree elements that reflect your interests, build your passions and prepare you for future opportunities.

Many programs provide the flexibility to add a **minor**, a cohesive set of courses that offer a foundation in another area of study. A minor usually consists of 4.0 credits.

In many programs, you can pursue a **concentration**, **specialization** or **stream**, where you study a selection of specialized courses that relate to your degree program.

Some programs are offered as **Combined Honours** degrees, where you fulfill the degree requirements of two major programs.

### Adding a minor

The following programs can be taken as a minor, but are available as major programs as well:

- African Studies
- Anthropology
- Applied Linguistics and Discourse Studies
- Art History
- Biology
- Business
- Canadian Studies
- Chemistry
- Communication and Media
- Criminology and Criminal Justice
- Earth Sciences: Earth Resources and Processes
- Economics
- English
- Entrepreneurship
- Environmental Studies
- European and Russian Studies
- Film Studies
- Food Science
- French
- Geography
- Geomatics
- Greek and Roman Studies
- History
- History and Theory of Architecture
- Human Rights and Social Justice
- Indigenous Studies
- Law
- Linguistics
- Mathematics
- Music
- Neuroscience and Mental Health
- Philosophy
- Physical Geography
- Physics
- Political Science
- Psychology
- Religion
- Sociology
- Statistics
- Women’s and Gender Studies

A minor in Business designed specifically for Engineering students is also available.

The following programs are offered exclusively as minors:

**Archaeology**

The minor in Archaeology allows students from any discipline to pursue a wide variety of approaches to the field of archaeology. Courses are drawn from the Greek and Roman Studies program as well as from allied subjects, such as Earth Sciences, Geography, Anthropology and Art History. Students have the opportunity to receive credit for participation in archaeological projects worldwide, including the Gabii Project (Italy), run in collaboration with Carleton faculty.

**Arts Management**

Arts and culture has become an important sector of Canadian industry, with ties to tourism, education and government. This minor is designed to equip students with the business and management skills to pursue careers in arts and culture, whether in institutions or as sole practitioners.

**Community Engagement**

Increasingly governmental, nongovernmental, economic, social, advocacy and research organizations are realizing the need for meaningful and ethical community engagement to bring about positive social change. Students in this minor develop theoretical tools and practical skills to engage with and build community, enabling them to work for change while respecting differences.

**Critical Race Studies**

Drawing on interdisciplinary perspectives from across the university, this minor allows students to learn about white supremacy, settler colonialism, anti-black and systemic racisms, and histories of racialization, migration, and diaspora in Canada and around the world. Students will have the opportunity to think about the categories of race and racialization as necessarily entangled with other forms of social difference.
Design
The minor in Design provides an opportunity for students to learn the fundamentals of design and creatively integrate them into their main field of study. Students will learn about the design of products, systems, services and experiences with consideration of how they are related to environmental, psycho-social and economic factors, and their contribution towards a better quality of life.

Digital Humanities
This minor engages with powerful trends in the discipline of English studies to equip you with critical thinking and cultural literacy skills. You will be able to harness the theoretical and creative possibilities opened up by computing technologies, networks and digital culture. Explore the ways in which digital technologies are transforming reading, writing and literature, and providing new insights into our textual past.

Disability Studies
This minor allows students to explore the ethics, politics, history and contemporary cultural dynamics of ‘disability’ from an interdisciplinary perspective. Students will focus on the discourses that create the category of disability in society.

Drama Studies
Through the combination of academic courses taught by scholars and drama workshops led by theatre practitioners, this minor allows students to develop skills in the areas of Theatre Criticism and Dramaturgy (the study of dramatic composition). Course options include workshops in acting and stagecraft, as well as in writing for stage and screen, along with intensive studies of topics in world and historical drama, including Shakespeare's plays and Indigenous drama.

Environmental and Climate Humanities
The Environmental and Climate Humanities minor provides a broad foundation in the environmental and climate humanities and opens new areas of inquiry by bringing together disciplines and approaches that have been too often kept apart. This minor introduces students to a range of disciplines including Geography and Environmental Studies, English, French, History, Religious Studies, Visual Art, Film, Music, Curatorial Studies, Law, Economics, Sociology and Anthropology, Communication and Journalism, Human Rights, African Studies, and Indigenous and Canadian Studies, among others.

Heritage Conservation
The discipline of Heritage Conservation is undergoing a period of expansion and evolution. Carleton's minor in Heritage and Conservation provides students an opportunity to critically examine definitions of heritage, why it matters, who it serves, and who makes decisions as to what is preserved. This unique minor addresses intersecting questions surrounding built heritage, intangible heritage, memory studies, sustainable conservation, cultural landscapes, Indigenous and settler heritage, commemoration and tourism.

Industrial Economics
Offered through the Department of Economics, this minor is designed for engineering students who wish to learn the aspects of economics that are most relevant to their major.

Latin American and Caribbean Studies
This minor will give you a competitive edge by helping you develop interdisciplinary expertise on Latin America and the Caribbean. As a student in this program, you will be exposed to international opportunities as well as research and language training opportunities. The minor will also give you the kind of training necessary to contribute professionally on an international level by introducing you to the politics, cultures, history, and economies of this region. An added benefit is that you will become part of a scholarly community and develop networks, as you will meet and work with students and faculty who share your passion about the region.

Medieval and Early Modern Studies (MEMS)
Gain an interdisciplinary understanding of the Middle Ages and the early modern period, as experienced not only in European and Byzantine contexts but also in the Islamic world. The MEMS minor offers a pathway for students to explore these periods by linking together many courses offered at Carleton in different departments.

Modern Languages
Learning to communicate in a second or additional language can be an enriching and fulfilling part of your educational experience. It can also open many doors in the worlds of work, travel and future education. Minors are available in the following modern languages: American Sign Language (ASL), German, Italian, Japanese, Korean, Mandarin Chinese, Russian and Spanish.

News Media and Information
Perhaps you’re looking to enhance your understanding of news media while studying a discipline other than Journalism. This minor explores journalism’s roots, evolution and vital role in modern democracies. Offering instruction beyond basic news literacy, the minor will familiarize you with all aspects of news work through various courses, from media law and ethics to contemporary digital disruptions.

Professional Writing
This minor teaches professional writing as a network of skills and cultural practices. Students learn how to tailor their writing to specific contexts, and the program offers exciting opportunities to gain experience writing in the workplace. Writing is one of the most valuable transferable skills in today’s knowledge-based economy, and our students leave prepared for their professional lives in government, NGOs, medical institutions and beyond.

Quebec Studies
This minor allows students to develop an interdisciplinary understanding of Quebec. As a distinct society, Quebec’s rich historical tradition and vibrant culture is explored through the study of history, culture, literature, and politics, while students also reach an advanced level of French-language proficiency. Students will be able to participate in experiential learning opportunities including a course in Quebec City. Knowledge of Quebec and of French is a definite asset for students interested in career opportunities such as government, foreign affairs, cultural institutions, education, translation, tourism, etc.

Sexuality Studies
This minor offers an interdisciplinary approach to a rapidly evolving field of study. Examine sexuality in its historical context and through current social, political and cultural practices. Topics include queer and trans theory and politics, marriage and the family, pornography and censorship, reproductive rights and HIV/AIDS activism.

Technology, Society, Environment Studies (TSE)
Multidisciplinary in nature, the TSE minor addresses the problems that have been created by the interactions of technology, society and the environment. The courses in this program cover a wide range of topics from technology in ancient societies to contemporary issues in risk, innovation, forecasting, information technology, environmental sustainability, product life cycle analysis, energy use and the philosophy of technology.

Urban Studies
Urbanization has become a defining feature of the twenty-first century. Rapidly urbanizing areas pose both challenges and opportunities with regards to sustainability, social justice, equity and human rights. The minor in Urban Studies helps students understand how cities work (or fail to work), and provides the concepts and skills needed to tackle critical questions of metropolitan governance, urban development and quality of life. It serves as a springboard for students interested in urban planning, community activism, working in urban policy in the public or non-profit sectors, or pursuing further studies in a related field.
Co-op and career opportunities

carleton.ca/co-op

The majority of our undergraduate programs include co-operative education (co-op) or work-study opportunities, which allow you to take theoretical concepts from the classroom and apply them to solving real-world problems in your field of study.

These work opportunities allow you to develop the tangible skills that employers are looking for. The strong industry and government connections that Carleton has built over the years have helped us create valuable work opportunities for our students. We are fortunate to work with employers who are happy to come to our campus to offer students career advice and, for some, employment when they graduate.

Co-operative education

Carleton’s co-op program is diverse and flexible. Co-op options are available in over 100 programs, streams and concentrations at the undergraduate level and in a select group of programs at the graduate level. Choosing to participate in the co-op option in your program means you will alternate your periods of study with four, eight, 12 or 16-month work terms with employers relating to your program of study. Typically, you will take an additional year of study to complete all academic and co-op program requirements, develop your work skills and acquire relevant industry experience. Co-op work opportunities are full-time, paid working opportunities.

Students participating in co-op must pay co-op program fees and take the required preparatory course, COOP 1000. This online course provides
information on the co-op program’s structure, regulations and expectations for participation. Course material will cover skills assessment, resume and cover-letter writing, interview preparation and transitioning to the workplace, among other topics.

**Admission to co-op**
You can select the co-op option at the same time as you are applying to your academic program. Once you’re at Carleton and have earned a sufficient number of credits towards your degree, the Co-op office will formally assess you for admission to the co-op program. If you did not request co-op when you applied to Carleton, you may still apply during your first year of study. Deadlines may vary, depending on the degree program.

**Other work experience**
Co-op programs are only one option for gaining work experience during your university studies. Many of our programs offer practicum or internship opportunities, both of which allow you to gain work experience, learn new skills and make important contacts.

**International internships**
Career Services also leads an International Internship Program, which connects students in all degree programs with a wide range of internship opportunities around the world for academic credit.

**Working in your degree**
To find out what work opportunities are available in your degree, visit the degree program page or section.

**Career development**
Career Services assists Carleton students not only in making the transition from school to work, but also in developing their professional skills starting in first year. Professional career counsellors and career consultants guide students through the discovery of a personal career path with a focus on how to set career goals and achieve them. Students also have many opportunities to connect with industry professionals through a variety of activities.

Services available to students include:
- access to a variety of job postings on mySuccess, our online job search system that lists part-time and full-time jobs, on-campus employment, volunteer and internship opportunities, and more;
- extensive offerings of employment workshops available in person and online;
- year-round career counselling and employment advising sessions (available by appointment or drop-in) with career consultants;
- information sessions and panel discussions with key industry employers; and
- multiple Career Fairs, networking events and a Graduate School and Education Fair.

Looking for ideas on what you can do with your degree? Explore the Employability pillar at pathways.carleton.ca

Are you planning on pursuing a professional designation such as an accountant, dentist, doctor, lawyer, pharmacist, teacher or veterinarian? Many of Carleton’s undergraduate programs are a great foundation for this next step. Co-op hours can also be used toward these professional designations.

The city of Ottawa provides ample opportunities for those looking for work experience or a career after graduation. It is home to a vibrant business sector, a strong high-tech industry, numerous cultural institutions (such as the Canadian Museum of History, pictured), and some of Canada’s most influential government and non-governmental organizations.
The Carleton community

As a Carleton student, you’ll have access to our unparalleled package of academic and co-curricular initiatives designed to support your complete university experience and promote a culture of success. You’ll also have many opportunities to get involved in community-building activities both on and off-campus.

Student Experience Office
The Student Experience Office (SEO) can help you adjust to university life and offers ways for you to get involved throughout your time at Carleton. The office oversees a wide variety of programs, such as:
- Summer and Fall Orientation sessions;
- First-Year Connections peer mentorship;
- Community service-learning initiatives, such as Alternative Spring Break; and
- Leadership development programs, such as the Campus Activity Board.
  carleton.ca/seo

Centre for Student Academic Support
The Centre for Student Academic Support (CSAS) is a centralized collection of services designed to improve learning inside and outside the classroom. The office provides peer-led individualized and group-based academic support services to provide you with university-level learning strategies. CSAS oversees a wide variety of programs, such as:
- Peer Assisted Study Sessions (PASS);
- Learning and Writing Support Workshops;
- Learning Support Sessions; and
- Writing Services.
  carleton.ca/csas

Academic Advising Centre
The Academic Advising Centre offers all students, including transfer students, with dedicated support through academic advising, assistance with understanding the Academic Audit and Academic Status Report (ASR) and advice on changing programs or adding elements.
  carleton.ca/academicadvising

International Student Services Office
The International Student Services Office (ISSO) offers services and programs that contribute to positive international experiences for all Carleton students. The office is dedicated to helping international and exchange students adjust to life in Canada and get the most out of their student experience. The ISSO supports and encourages Carleton students in gaining international exposure both locally and abroad through volunteer opportunities, international internships and co-op, and participation in exchange or study abroad programs.
  carleton.ca/issvo

University Registrar’s Office
The University Registrar’s Office manages the academic activities and records of all students and helps with transcript requests, course registration and more. carleton.ca/registrar
Supportive facilities
MacOdrum Library
The library houses a collection of books, journals, government documents, maps, newspapers, board games, video games, graphic novels, music scores, CDs, microforms, archives and rare materials, including a wide range of electronic resources available any time via the web. While in the building, you can take advantage of the Laptop Loan program. Experienced staff throughout the library are available in person, by phone and online to help students with everything from research to data services. library.carleton.ca

Paul Menton Centre for Students with Disabilities
The Paul Menton Centre (PMC) coordinates academic accommodations and support services for students with disabilities. Services include academic accommodations, attendant services, alternate formats, adaptive technology, note-taking, sign language interpretation, learning support and services specific to students’ educational-related disability needs. carleton.ca/pmc

Health and Counselling Services
Carleton’s newly renovated, multidisciplinary on-campus healthcare facility provides medical and counselling services, a resource centre and a health promotion program for Carleton students. carleton.ca/health

Co-Curricular Record
Attending classes is only one part of your university experience. Campus life is also about joining clubs and societies, attending special events and lectures, hanging out with friends and participating in one of our community outreach programs.

We encourage our students to become active members of the larger community. Participation in community service-learning activities and involvement in student organizations are acknowledged in our Co-Curricular Record (CCR), which will track your out-of-class learning experiences and become part of your official record at Carleton University. carleton.ca/seo/ccr

An accessible and inclusive campus
We are strongly committed to providing an environment where everyone is able to study, work and live free of discrimination or harassment. Carleton’s Department of Equity and Inclusive Communities (EIC) and student-run organizations administer numerous on-campus centres and programs that foster diversity, equality, dignity and respect.

Some of the centres and programs that support our diverse community include: the Centre for Indigenous Initiatives; Sexual Assault Support Services; REC Hall (Race, Ethnicity and Culture Hall); Womxn’s Learning, Advocacy and Support Centre; Carleton Disability Awareness Centre; Spirituality Centre; Muslim prayer room; and, the Carleton University Safer Spaces Program which supports Carleton’s sexual orientation and gender equity policies.

For information on Carleton’s human rights policies and procedures, visit carleton.ca/equity.

Clubs and societies
Our extensive network of clubs and societies is another great way to meet new people and pursue your interests outside the classroom. With more than 300 active clubs and societies to choose from, you will certainly find a venue for your academic, social, political or charitable interests. For a complete list of all our clubs and societies and their contact information, visit cusaonline.ca.

Students giving back
When you get to Carleton, you will be joining a student body that has a history of offering support to others.

Shinerama—Since 1984, students have spread out across the city during Fall Orientation to wash cars and shine shoes to raise money for Cystic Fibrosis.

Alternative Spring Break—This popular program has given students the opportunity to volunteer on community service projects in Ecuador, Guatemala, Costa Rica and more.

Enhance your degree at the Discovery Centre
The Discovery Centre is a collaborative and creative student study space on the fourth floor of the MacOdrum Library. With sofas, and mobile tables and chairs, it has been designed for students to configure their study space to suit their needs. Media booths are also available with large screens for connecting laptops or tablets to make group work engaging and easy. To assist with creativity, there are also two treadmill desks for study while walking, a Gaming Lab, a Multi-media Lab and a Learning Lab. The Discovery Centre is also a resource for connecting you with hands-on learning through international experiences, community engagement, immersive learning and undergraduate research. carleton.ca/discoverycentre

Discover your pathway to graduation
Pathways to Graduation is designed to help guide you along a path to graduation that is right for you. From the start of your degree to the day you graduate, Pathways to Graduation helps you to transition through each phase of your undergraduate degree and reach your ultimate goal of graduation. pathways.carleton.ca

Stay connected
Current students can explore all of our student services at students.carleton.ca and connect with Carleton on Twitter and Instagram @Carleton_U and on Facebook at facebook.com/carletonuniversity.
Living in residence

If you want to experience university life as a member of a vibrant, close-knit community, consider living in residence. You will love living minutes away from your classes, the library, athletics and a large dining hall.

Every year, more than 3,600 students choose to live in residence. For many students, choosing to live on campus is one of the best decisions they make.

In residence, you will have the opportunity to meet people from around the world and make friendships that last a lifetime. You will be supported by a network of Residence Life staff who are there to assist you in any way they can.

First-year guarantee
At Carleton, a double traditional room is guaranteed to all secondary school and CEGEP students entering first-year studies in the fall, provided they receive an Offer of Admission on or before May 13, 2022. You are required to pay the deposit and accept the residence offer online by June 8, 2022, at 4:30 p.m. ET to confirm your space. If you do not qualify for a guaranteed space in residence, you can still apply. A lottery determines offers for all other residence applications. housing.carleton.ca/applying-to-residence

What does residence offer?
Campus connections
We understand that students are always on the go. Our residence buildings are conveniently located and connected to each other, and to the rest of campus, via underground tunnels, enabling you to get to class, meals or workouts within minutes. You’ll find it easy to arrange meetings with friends, study partners or professors. With the conveniences—not to mention the unique living experience—that residence offers, you will be glad that you chose to make residence your home away from home.

Two living styles
Our residences offer two types of rooms—traditional and suite-style rooms. Traditional rooms consist of one or two beds in a room with shared washroom facilities, the majority of which are double rooms. A limited number of traditional-style rooms are in pods. The pods consist of doubles and singles, washroom facility and a shared common area.

Our suite-style rooms consist of four-person suites, either two doubles or four singles, with a shared common area, washroom facility and food preparation area including a fridge and microwave.

The majority of our rooms for students entering first year are double traditional style and are assigned as single-gender. A very limited number
Residence meals are served in our large, newly renovated dining hall, the caf, in Residence Commons which offers a wide selection of healthy and nutritious foods.

A traditional double room in Stormont and Dundas House.

of traditional singles, suite doubles and suite singles are available.

Roommates are an integral component of the Carleton residence life experience. You can request a specific person (who also must request you in order to be placed together) or be matched with another student based on the responses you provide on the Residence Information Form. Sharing a residence room can be an enriching and supportive experience as you transition into university life, and may even lead to life-long friendship.

Gender-inclusive living
Students selecting this option will have their room, pod and/or suitemates assigned through the matching of profile questions on the Residence Information Form regardless of the gender with which they identify. Please note that if you select “yes,” you are agreeing to share a room (and bathroom, etc.) with a student who may be a different gender than the one with which you identify. For example, if you identify as female, you could be sharing a room with a student who identifies as male or non-binary, who selected “yes” to this question and has similar preferences.

All-Access Meal Plan
First-year students living in residence will be enrolled in the All Access Meal Plan, which provides unlimited entry into our residence dining hall, the caf, and $100 Dining Dollars. For students living in suite-style residences, there is a Reduced Meal Plan option, which offers ten meals per week and $300 Dining Dollars. The caf sources food locally, accommodates dietary needs and offers an “all you care to eat” experience featuring a variety of meals cooked right in front of you. Visit housing.carleton.ca/fees-and-food for further information.

Getting involved
Living in residence is a great way to learn and gain experience outside of the classroom. Becoming involved in your communities is also a wonderful way to develop relationships with peers.

In residence, there are several ways you can do this, including volunteering as a Mental Health Champion, visiting the Raven’s Roost, and participating in events, programs and committees in and around residence. housing.carleton.ca/get-involved

An extensive support network
Embarking on a new chapter in life, especially when living on your own for the first time, can take some getting used to. Carleton’s award-winning Residence Life program has been designed to help with this transition so you can reach your academic and personal goals. Our extensive residence support network includes residence counsellors, live-in residence staff and a focus on learning outside the classroom. housing.carleton.ca/living-in-residence

Cost
Fees for traditional residence for 2021-2022 range from $11,359 (double occupancy) to $12,547 (single occupancy) and cover the cost of your room, communication fees and an All Access Meal Plan. Suite-style residences range from $12,635 (double occupancy) to $13,899 (single occupancy) with an All-Access Meal Plan. Detailed information about the cost of residence is available at housing.carleton.ca/fees-and-food.

Off-campus accommodation
Information regarding off-campus housing is available on our website: housing.carleton.ca/off-campus-housing
Carleton Athletics

athletics.carleton.ca | goravens.ca

Carleton Athletics is the active hub of the Carleton community. Through teamwork, we deliver excellence in sport, health and life.

As a Carleton student, you can take full advantage of our first-class athletic facilities, conveniently located in one area of campus. You can sign up for fitness classes, swim laps in the pool, lift weights, run on a treadmill in the 11,000 sq. ft Fitness Centre or get together with friends to play one of your favourite sports during open recreation time. A little friendly competition never hurt anyone, so why not try one of our intramural or inter-university club teams? If you are looking for a bigger challenge, consider trying out for a spot on one of our men’s or women’s varsity teams. Whatever your level of fitness, you are sure to find something here that suits you.

Ravens Centre
At Carleton Athletics, we dare you to challenge yourself. Our facilities are your one-stop-shop for all things athletic. The Ravens Centre houses a 50-metre L-shaped pool, a Fitness Centre, two NHL-sized ice pads, an indoor track, gymnasiums, five international squash courts, and sports medicine and sports therapy clinics.

Alumni Hall
This building is home to the Ravens’ Nest, a triple gymnasium that, when not serving as home court for 1,500 cheering basketball fans, is open to students for basketball. This building also houses our Fitness Centre with over 50 cardio machines and a great selection of weight training equipment.

Fieldhouse
Stretch your legs on a 4,500 sq. m sports field and a 230 m, two-lane indoor jogging track. Rain or shine, members of Carleton Athletics benefit from access to the Fieldhouse. The facility is the perfect spot for a pick-up game of soccer or ultimate in the winter months.

Ice House
Take advantage of some of the best ice in the city year-round on our two NHL-sized ice surfaces. The $13M arena is the most comprehensive facility of its kind in central Ottawa. Students can access the rink for pick-up hockey games, skating lessons and open skate sessions.
Join a team or watch a game

<table>
<thead>
<tr>
<th>Varsity Teams</th>
<th>Competitive Clubs</th>
<th>Intramurals</th>
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</thead>
<tbody>
<tr>
<td>Basketball</td>
<td>Baseball</td>
<td>Ball Hockey</td>
</tr>
<tr>
<td>Fencing</td>
<td>Curling</td>
<td>Basketball</td>
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<tr>
<td>Football</td>
<td>Dance</td>
<td>Flag Football</td>
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<tr>
<td>Golf</td>
<td>Equestrian</td>
<td>Ice Hockey</td>
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<tr>
<td>Hockey</td>
<td>Figure Skating</td>
<td>Indoor Soccer</td>
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<tr>
<td>Nordic Skiing</td>
<td>Kendo</td>
<td>Indoor Ultimate</td>
</tr>
<tr>
<td>Rowing</td>
<td>Lacrosse</td>
<td>Volleyball</td>
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<tr>
<td>Rugby</td>
<td>Rugby</td>
<td>And more...</td>
</tr>
<tr>
<td>Soccer</td>
<td>Swimming</td>
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<tr>
<td>Water Polo</td>
<td>Track and Field</td>
<td></td>
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<tr>
<td></td>
<td>Ultimate</td>
<td></td>
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<tr>
<td></td>
<td>Water Polo</td>
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</table>

M=Men, W=Women, C=Co-ed, O=Open

Outdoor field
Carleton's indoor venues are enhanced by excellent outdoor facilities, including the newly-renovated, 3,000-seat Ravens Perch, complete with FIFA-standard artificial turf, a multi-purpose field and five tennis courts.

Follow @ravenscentre on social for updates, fun content and all things Carleton Athletics!

Fitness classes for everyone
Getting in shape shouldn't be a chore, so have fun and invigorate your body with one of our many fitness programs. Discover what Carleton Athletics has to offer. With over 80 exciting classes offered each week, there's something for everyone!

Some of the classes we offer include:
- Aquafit
- CU Strong
- Dance
- Group and specialty fitness
- Indoor group cycling
- Martial arts
- Skating
- Yoga and Pilates
- Zumba

With so many options, it can be difficult to choose just one. That's why we've introduced the CfFit Pass, which offers more variety and flexibility, giving you access to a variety of fun drop-in classes. For a complete listing of classes offered and for more details on all of our programs, visit athletics.carleton.ca.

Intramurals
New to the city or just looking to compete in a sport you love? Meet new friends and battle for a league title with Carleton's intramural leagues. Both team and individual registrations are available online at athletics.carleton.ca/leagues or in person at the Welcome Centre in Alumni Hall.

Varsity sports
Are you interested in proudly donning the Raven for one of our varsity teams or competitive clubs? Visit goravens.ca for the latest information on the Ravens, including tryout dates and coaches’ contact information.

Cheering on the Ravens
Our student spirit group, @CUBirdGang, is the best there ever was! They are the loudest and proudest student fans in the country. Want to join in? Deck yourself out in red and black, crank up the noise level and be part of the unbeatable atmosphere at our home games. Follow @CURavens and @CUBirdGang to keep up to date with all the action.

Ravens House Cup
Plan on living on campus? Join us for a friendly competition among the residence houses for total Ravens domination.

Rodney’s House
Swing by Rodney’s House, our box office in Alumni Hall, to pick up your BirdGang pass or tickets to any Ravens home game.

Got gear? Visit shopravens.ca to check out the Ravens and BirdGang gear. Our merchandise shop is run by students and all proceeds support our varsity programs.

For full game schedules or for additional information about our great programs, visit goravens.ca.

Ravens Sports Business Club
Established in 2017, the Ravens Sports Business Club (RSBC) allows students to gain real-world experience in the sports industry. Our members have worked on projects across a range of interests including social media content curation, corporate partnerships, merchandise design and sales, game entertainment and student engagement. Visit goravens.ca/rsbc for more information.

Carleton Esports
Carleton is the founding member of a new Esports league, Ontario Post-Secondary Esports. This league is the first of its kind in Canada and we are so proud to offer this new area of competition to our Ravens community. For league information, titles, schedules and standings, visit opsesports.ca.

Ravens Reinvented
We all know that Ravens are intelligent and creative. We put those attributes to the test over the past year.

Despite last year's challenges, our student athletes continued to train and grow their social-justice footprint. Our student-led varsity council created three sub-committees in the area of social justice and activism including the Anti-Racism Committee, Community Outreach Committee and the Gender Equity/zSLGTBQ+ Committee. These groups engaged with our community by connecting virtually with the elderly, providing warm mittens, toques and blankets to those experiencing homelessness and raising funds for breast cancer research.

To be a part of a Ravens Varsity team or competitive club, please visit goravens.ca for tryout times and registration.
Tuition, bursaries and scholarships

carleton.ca/awards

We are pleased to offer our students one of the most generous scholarship programs in the country. Last year, 14,700 scholarships and bursaries totaling over $28.6 million were awarded to undergraduate students. Contact our Awards and Financial Aid Office to get information on all your financial assistance options.

Entrance Scholarships
If you have been admitted to Carleton with an admissions average of 80 per cent or better, you will automatically be considered for a renewable Entrance Scholarship at the time of admission. The admission average we use is calculated from the grades submitted by your high school in support of your application.

Entrance Scholarships are offered for fall entry only. You may be offered a renewable Entrance Scholarship provided you are entering Carleton for the first time from high school or CEGEP and have no previous attendance at post-secondary educational institutions. To be considered for an Entrance Scholarship, Carleton’s Admissions Services must receive your complete application for admission and all required grades (either directly or through the Ontario Universities’ Application Centre) by June 1. Entrance Scholarship offers are not assessed or reassessed on final high school grades.

Prestige Scholarships
Our highest awards are our Prestige Scholarships. You will be considered for a Prestige Scholarship only if you are entering Carleton directly from high school or CEGEP. For all Prestige Scholarships, you must achieve an admission average of 90 per cent or better. The selection committee will also assess the range of your community or secondary school extracurricular activities. An application and letter of reference are required. The deadline is March 1.

Other Entrance Scholarships
Carleton Capital Scholarship
Up to 13 students will be selected annually, with one recipient for each province and territory, to receive a $2,000 award in their first year. The Carleton Capital Scholarship is awarded in addition to other Entrance Scholarships.

To be eligible for the Carleton Capital Scholarship, students must be Canadian citizens, permanent residents or protected persons entering the first year of a degree program and pursuing post-secondary studies for the first time. Students must also demonstrate participation in extracurricular activities and a strong academic background (with a minimum admission average of 90 per cent). An application and letter of reference are required. The deadline is March 1.

Sprott School of Business Scholarships
The Dean’s Entrance Scholarship of Excellence, valued at $2,000 or $4,000, will be awarded to the top students entering the first year of the Bachelor of Commerce program. This scholarship is awarded in addition to other Entrance Scholarships.

Faculty of Engineering and Design Scholarships
Up to 60 scholarships, valued at $1,000 to $5,000, will be awarded to the top students who are entering selected Bachelor of Engineering programs. The scholarship is awarded in addition to other Entrance Scholarships.

Page Program Entrance Scholarships
Up to 15 scholarships will be awarded to students in the House of Commons Page Program who are entering an undergraduate degree program at Carleton. Valued at $1,000, the scholarship is awarded in addition to other Entrance Scholarships.

Arthur Kroeger College National Scholarships
Up to 10 scholarships will be awarded to students entering the Bachelor of Public Affairs and Policy Management program. Two students (minimum admission average of 90 per cent) will be selected from each of the following five regions:
- Atlantic Canada
- British Columbia and Northern Canada
- Ontario
- Prairies
- Quebec

Valued at $2,000, the scholarship will be awarded in addition to other Entrance Scholarships.

Collins Memorial Entrance Scholarships for Earth Sciences
Two or more scholarships, valued at $1,000 to $4,000, will be awarded to students entering the first year of an Earth Sciences program. The scholarship is awarded in addition to other Entrance Scholarships.

Bursaries
A bursary is a monetary award similar to a scholarship in that you are not expected to repay it, but is awarded primarily on financial need rather than academic achievement. A Carleton University Entrance Bursary will provide you with additional funds and will help you meet the direct education costs of your first-year studies. To be considered for an Entrance Bursary, apply online by June 30. Information about our bursaries can be found at carleton.ca/awards/bursaries.

Leadership Entrance Bursary
High school students who have taken a leadership role in their school’s extracurricular activities and in community service may also be considered for a Leadership Entrance Bursary. Information on how to apply and eligibility can be found at carleton.ca/awards/bursaries.

Working on campus
A great way to offset the expense of university is to have a part-time job on campus. At Carleton, most campus units hire students throughout the academic year. Senior students can often find positions with departments as research assistants. A part-time job not only puts extra money in your pocket, but also provides valuable job experience at the same time. Visit the Career Services website to check out online job postings. carleton.ca/career

Work Study Program
The Work Study Program provides part-time employment at Carleton for those students demonstrating financial need. Students can learn more by visiting carleton.ca/awards/students.
Other funding
If you are currently attending an Ontario high school, your guidance office can provide information on the Ontario Student Assistance Program (OSAP), which may help cover the cost of your post-secondary studies. Similar programs exist in other provinces. More information on out-of-province student assistance programs can be found at carleton.ca/awards/out-of-province-students.

Find out about additional financial assistance from the Carleton Awards and Financial Aid Office at carleton.ca/awards or from the federal government’s website canlearn.ca, which provides in-depth information on government financial assistance and private scholarships.

Equity, Diversity and Inclusion Awards
Carleton’s vision of providing equitable, diverse and inclusive opportunities is fundamental to our vision of excellence. We’re proud to offer a wide range of awards that deliver on this commitment, and we continue to develop additional award opportunities under Carleton’s EDI Action Plan in the coming years.

Indigenous Student Awards
We offer a wide range of awards for Indigenous students. Bursaries including the Tyendinaga Mohawk Nation Education Bursary, Humphrey Law Bursary for Indigenous Students in Business and the Métis Nation of Ontario Bursary are a few of the many awards offered to Indigenous students through the Awards and Financial Aid Office. Information about our Indigenous Student Awards and how to apply are outlined at carleton.ca/awards/awards-for-indigenous-students.

Awards for Students with Disabilities
There are several awards and financial aid options available to incoming and current students with a permanent disability who are registered with the Paul Menton Centre (PMC). Information about our awards for Students with Disabilities and how to apply are outlined at carleton.ca/awards/awards-for-students-with-disabilities.

<table>
<thead>
<tr>
<th>Renewable Entrance Scholarships</th>
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<tbody>
<tr>
<td><strong>No application required.</strong></td>
</tr>
<tr>
<td><strong>Admission average</strong></td>
</tr>
<tr>
<td>95-100%</td>
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<tr>
<td>90-94.9%</td>
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<tr>
<td>85-89.9%</td>
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<tr>
<td>80-84.9%</td>
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<tr>
<td>*Annual GPA of 10.0</td>
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<tr>
<th>Prestige Scholarships</th>
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</thead>
<tbody>
<tr>
<td><strong>All renewable at A- standing</strong></td>
</tr>
<tr>
<td><strong>Minimum 90 per cent admission average and extracurricular activities. Application required.</strong></td>
</tr>
<tr>
<td><strong>Deadline: March 1</strong></td>
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<tr>
<td>Colleges Scholarship (10)</td>
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<tr>
<td>(Full tuition in first, second, third and fourth year)</td>
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<tr>
<td>Richard Lewar Scholarship (7)</td>
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<tr>
<td>Carleton University Scholarship of Excellence (3)</td>
</tr>
<tr>
<td>Carleton’s Shad Valley Scholarship of Excellence (2)</td>
</tr>
<tr>
<td>Jay Woo &amp; CAA Scholarship (1)</td>
</tr>
<tr>
<td>Riordon Scholarship (1)</td>
</tr>
<tr>
<td>Collins Prestige Scholarship (1)</td>
</tr>
<tr>
<td>*Annual GPA of 10.0</td>
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Your tuition, your investment

<table>
<thead>
<tr>
<th>Living on campus</th>
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</thead>
<tbody>
<tr>
<td><strong>Tuition and miscellaneous fees (2021-2022)</strong></td>
</tr>
<tr>
<td>Traditional residence room and board*</td>
</tr>
<tr>
<td>Books and supplies (varies according to program)</td>
</tr>
<tr>
<td>Personal expenses</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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</table>

<table>
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<tr>
<th>Living off campus</th>
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</thead>
<tbody>
<tr>
<td><strong>Tuition and miscellaneous fees (2021-2022)</strong></td>
</tr>
<tr>
<td>Off-campus housing**</td>
</tr>
<tr>
<td>Books and supplies (varies according to program)</td>
</tr>
<tr>
<td>Personal expenses</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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</tbody>
</table>

| Tuition fees for international students range from $29,023 - $42,873 (CDN). |

* Based on double room, includes an All Access Meal Plan and technology fees (internet and Wi-Fi).
** Estimate based on eight months of rent (shared accommodations) and groceries. carleton.ca/fees
Environmental sustainability

As a distinguished research and teaching institution, Carleton University has a responsibility to lead and act decisively in addressing the challenges arising from climate change and in developing solutions and showcasing the opportunities that this presents for the campus community.

- Carleton is ranked second in Canada and 57th in the world within the UI Green Metric Sustainability Ranking (2020).
- To date, we have achieved a 35% reduction in our carbon emissions and have set carbon neutral targets for 2050.
- We are on our way to becoming a zero-waste campus, with both our main food courts certified as zero waste.
- Our new Sustainability Plan embeds the UN Sustainable Development Goals to better align our contribution to global efforts.
- We are Fairtrade Campus and Green Restaurant certified, demonstrating a commitment to local and sustainable dining operations.

Photo by Mark McGregor on Unsplash.
**Start your journey**

*Some programs have early application deadlines and some programs require additional admission material. For more information, view pages 74 to 75. This timeline is based on the 2021-2022 academic year.

<table>
<thead>
<tr>
<th>2021</th>
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<tbody>
<tr>
<td><strong>September</strong></td>
<td>The Ontario Universities’ Application Centre (OUAC) application opens</td>
</tr>
<tr>
<td><strong>October</strong></td>
<td>Join us for Fall Open House</td>
</tr>
<tr>
<td><strong>November</strong></td>
<td>Program-specific specialty tours</td>
</tr>
<tr>
<td><strong>December</strong></td>
<td>Early admission period begins</td>
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<table>
<thead>
<tr>
<th>2022</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>January</strong></td>
<td>Admission period begins</td>
</tr>
<tr>
<td></td>
<td>13 Deadline for Ontario secondary school students to submit applications to the OUAC*</td>
</tr>
<tr>
<td><strong>February</strong></td>
<td>Program-specific specialty tours</td>
</tr>
<tr>
<td><strong>March</strong></td>
<td>Deadline to apply for a Prestige Scholarship</td>
</tr>
<tr>
<td></td>
<td>Early application and additional admission material deadlines (see pages 74-75)</td>
</tr>
<tr>
<td></td>
<td>Join us for March Open House</td>
</tr>
<tr>
<td><strong>April</strong></td>
<td>Program-specific specialty tours</td>
</tr>
<tr>
<td><strong>May</strong></td>
<td>Join us for Spring Open House</td>
</tr>
<tr>
<td><strong>June</strong></td>
<td>General application deadline for fall admission*</td>
</tr>
<tr>
<td></td>
<td>1 Deadline to accept an Offer of Admission for Ontario high school students</td>
</tr>
<tr>
<td></td>
<td>8 Deadline to accept an offer of residence and pay the residence deposit</td>
</tr>
<tr>
<td></td>
<td>30 Deadline to apply for an Entrance Bursary</td>
</tr>
</tbody>
</table>
Application checklist

Apply to Carleton in just five easy steps. For more information on how to apply, check out admissions.carleton.ca/apply.

1. CARLETON 360
Sign up today for Carleton360 to receive customized Carleton information based on your interests. As you continue to fill in your information, we will continue to tailor your experience: 360.carleton.ca

2. APPLY ONLINE AT OUAC BY JANUARY 13
Apply to Carleton University through the Ontario Universities’ Application Centre (OUAC): ouac.on.ca.

3. TRACK YOUR APPLICATION
After applying to OUAC, you’ll receive an email from us with your Carleton applicant number and MyCarletonOne (MC1) username and password. You can check the status of your application on Carleton360 at any time.

4. WAIT TO HEAR FROM US
While we process your application, follow us on social at @carleton_future and facebook.com/carletonfuture, and keep an eye out for email alerts from Carleton to learn about upcoming events and information.

5. ACCEPT YOUR OFFER
After you receive your Offer of Admission, be sure to accept by the date indicated on your offer letter to reserve your spot in the program. You can view and accept your offer on the Admission Offer Details page on Carleton360.
Admission to Carleton

How to apply
All students interested in Carleton must apply online through the Ontario Universities’ Application Centre (OUAC) website at ouac.on.ca. If you are presently finishing your last year of high school in Ontario, you must obtain login information from your school's guidance office before applying online.

Application deadlines
The following deadlines apply for admission to Carleton University for fall term (September to December).

High school students in Ontario
Ontario high school students should submit their application to the OUAC by January 13, 2022.

High school students in Canada (excluding Ontario)
CEGEP students
USA students
The general application deadline for fall admission is June 1. Some programs have early application deadlines and some programs require additional admission material.

International students
The application deadline for students with documents originating outside Canada or the United States is April 1. Some programs have early application deadlines and some programs require additional admission material.

The deadline to apply for admission to Carleton University for winter term (January to April) is November 15.

Early application deadlines
The following deadlines apply to select programs for the fall term (September to December). Additional admission material may be required.

Architectural Studies
Application deadline: March 1
Portfolio deadline: March 1

Humanities
Portfolio deadline: March 1

Industrial Design
Application deadline: March 1
Portfolio deadline: March 1

Information Technology: Interactive Multimedia and Design
Application deadline: March 1
Portfolio deadline: March 1

Music
Application deadline: March 1
Audition booking deadline: March 1

Social Work
Application deadline: March 1
Supplementary application deadline: March 1

Admission requirements
All admission information should be used as a guide only. Programs have limited enrolment and cut-off averages may vary from year to year. In determining admissibility, Carleton reserves the right to take into account repeated courses, grades in specific subjects, and other aspects of the student’s academic record.
If you are enrolled in an IB diploma program, International baccalaureate (IB) appropriate advanced standing credit, subject with a minimum grade of 4 will be granted Advanced placement (AP) alternative requirements.

Please contact Admissions Services for possible prerequisites are not available at your school, the average calculated for admission. If any prerequisite course marks are included in for admission to particular programs. carleton.ca/international to have completed one year of university studies. For some countries, applicants will be required or certificate and any graduation exam results.

Students outside Canada United States high schools or American-based high schools overseas Minimum B-average, completion of Grade 12 with a minimum of 4 academic units and a minimum of 16 academic units completed during Grades 9-12. For some limited enrolment programs, a higher average may be required. Applicants are encouraged to submit SAT or ACT scores, school profile including accreditation information, school grading information including pass marks and rank in class to support their application. carleton.ca/usa

International high schools Applicants who have completed high school diploma requirements in international high schools will be considered for admission to first year. As a general guideline, you will need a secondary school or high school graduation certificate. Education should normally consist of a minimum of 12 years of study. You will need to present transcripts from your senior high school year, along with your graduation diploma or certificate and any graduation exam results. For some countries, applicants will be required to have completed one year of university studies. carleton.ca/international

Prerequisite courses Prerequisite courses are necessary requirements for admission to particular programs. Prerequisite course marks are included in the average calculated for admission. If any prerequisites are not available at your school, please contact Admissions Services for possible alternative requirements.

Advanced placement (AP) Applicants who have completed AP exams with a minimum grade of 4 will be granted appropriate advanced standing credit, subject to the discretion of the appropriate faculty, to a maximum of 3.0 credits.

International baccalaureate (IB) If you are enrolled in an IB diploma program, you will need the full IB (three subsidiary and three higher-level subjects), with a minimum of 28 points. Please note some programs are more competitive and will require higher scores. You must also have a grade of 4 or better in prerequisite subjects. IB students may be awarded advanced standing (transfer) credit for higher-level subjects with a grade of 5 or better, subject to the discretion of the appropriate faculty, to a maximum of 3.0 credits.

Admission with an ESL requirement The language of instruction at Carleton University is English. In their own interest, students whose first language is not English must demonstrate that they can cope with the language demands of an English language university. Students can demonstrate their English language proficiency by presenting official transcripts to indicate that they have studied for the last three years (full-time) in a high school, college or university in Canada, the United States, the United Kingdom or any other country in which the primary language is English and where the language of instruction in the relevant educational institution was exclusively English. Students choosing this option should note the following:

- time spent in ESL courses will not count towards meeting these requirements;
- language requirements will not be waived as a result of completing senior-level high school English courses;
- if a student provides an English language test score, in addition to evidence of three years of study, the university reserves the right to review the admissions decision; and
- the university reserves the right to request an English Language Proficiency test from any applicant regardless of their academic background.

Students who cannot demonstrate three full-time years in an English medium school as outlined above must present one of the English language test scores listed in the chart on this page.

Students with a language test score below those listed may still be eligible for an Offer of Admission but with an English language requirement. Students admitted with an English language requirement will begin studies in our Foundation Program.

Students presenting the following English language test scores may be eligible for an offer of admission with no ESL requirement and may begin full-time studies.

<table>
<thead>
<tr>
<th>English language tests</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canadian Academic English Language Assessment (CAEL)</td>
<td>70</td>
</tr>
<tr>
<td>Internet-based TOEFL (IBT)</td>
<td>86 (min. 22 in writing and speaking and 20 in reading and listening)</td>
</tr>
<tr>
<td>IELTS</td>
<td>6.5 IELTS (min. 6.0 in each band)</td>
</tr>
<tr>
<td>Pearson Test of English (PTE) Academic</td>
<td>60 (min. 60 in each Communicative Skill)</td>
</tr>
</tbody>
</table>

For more information on the language test score needed for an Offer of Admission with an English language requirement, go to admissions.carleton.ca/esl.

Please note that students beginning their studies with an English language requirement are not eligible for admission to the following programs:

- Architectural Studies
- Health Sciences
- Humanities
- Industrial Design
- Information Technology
- International Business
- Journalism
- Journalism and Humanities
- Media Production and Design
- Public Affairs and Policy Management

Enriched Support Program For students whose high school grades do not reflect their academic potential, or for those who are apprehensive about returning to school after an absence, the Enriched Support Program (ESP) offers an opportunity for students to prove their academic ability in a structured university environment. ESP students can register in three full-credit first-year courses, which they supplement with regular weekly workshops offering academic support. After the ESP year, students who attain the necessary grade point average in their ESP courses are eligible for acceptance into a full-time degree program. carleton.ca/esp

Indigenous Enriched Support Program The Indigenous Enriched Support Program (IESP) is an alternative entrance program offered through the Centre for Indigenous Initiatives. This program offers admission opportunities as well as academic and social support for Indigenous, First Nations (Status and Non-Status), Métis and Inuit students in their first year of study. carleton.ca/iesp

For more information on the language test score needed for an Offer of Admission with an English language requirement, go to admissions.carleton.ca/esl.
<table>
<thead>
<tr>
<th>Degree program</th>
<th>Areas of study</th>
<th>Required prerequisite courses</th>
<th>Minimum cut-off range</th>
<th>2020 incoming class average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Architectural Studies*</td>
<td>• Conservation and Sustainability* • Design* • Urbanism*</td>
<td>• English (ENG4U) • Physics (SPH4U) • Advanced Functions (MHF4U)</td>
<td>75-77%</td>
<td>89%</td>
</tr>
<tr>
<td>Bachelor of Arts</td>
<td>• African Studies • Anthropology* • Applied Linguistics and Discourse Studies • Art History • Biology • Canadian Studies • Childhood and Youth Studies • Criminology and Criminal Justice • English* • Environmental Studies* • European and Russian Studies* • Film Studies • French* • Geography* • Geomatics* • Greek and Roman Studies • History* • History and Theory of Architecture • Human Rights and Social Justice • Indigenous Studies • Law* • Linguistics • Music • Philosophy • Political Science* • Psychology* • Religion • Sociology* • Women's and Gender Studies</td>
<td>All BA programs: • English (ENG4U) • BA Biology: • English (ENG4U) • Chemistry (SCH4U) (Advanced Functions [MHF4U] and Calculus [MCV4U] recommended)</td>
<td>75-77%</td>
<td>84%</td>
</tr>
<tr>
<td>Bachelor of Cognitive Science</td>
<td>• Biological Foundations of Cognition* • Cognition and Computation* • Cognition and Psychology*</td>
<td>• Language and Linguistics* • Philosophical and Conceptual Issues* • English (ENG4U)</td>
<td>75-77%</td>
<td>84%</td>
</tr>
<tr>
<td>Bachelor of Commerce</td>
<td>• Accounting* • Entrepreneurship* • Finance* • Information Systems* • International Business* • Management* • Marketing* • Supply Chain Management*</td>
<td>• English (ENG4U) • Advanced Functions (MHF4U)* • Calculus (MCV4U)*</td>
<td>80%</td>
<td>85%</td>
</tr>
<tr>
<td>Bachelor of Communication and Media Studies*</td>
<td>• Algorithms* • Artificial Intelligence and Machine Learning* • Computer and Internet Security* • Computer Game Development*</td>
<td>• Management and Business Systems* • Software Engineering* • Advanced Functions (MHF4U) • Calculus (MCV4U)</td>
<td>85-88%</td>
<td>88%</td>
</tr>
<tr>
<td>Bachelor of Computer Science</td>
<td>• Computational Analysis* • Development* • Economic Theory* • Economic Data Science* • Financial Economics* • International Political Economy* • Mathematics and Quantitative Economics* • Natural Resources, Environment, and Economy*</td>
<td>• English (ENG4U) • Advanced Functions (MHF4U) • Calculus (MCV4U) strongly recommended</td>
<td>75-77%</td>
<td>80%</td>
</tr>
<tr>
<td>Bachelor of Economics</td>
<td>• Aerospace* • Architectural Conservation and Sustainability* • Biomedical and Electrical* • Biomedical and Mechanical* • Civil* • Communications* • Computer Systems* • Electrical* • Engineering Physics* • Environmental* • Mechanical* • Software* • Sustainable and Renewable Energy*</td>
<td>• Advanced Functions (MHF4U) • Chemistry (SCH4U) • Physics (SPH4U) • One credit from Calculus (MCV4U), Biology (SBI4U), or Earth and Space Science (SES4U) (Calculus [MCV4U] recommended)</td>
<td>75-85%</td>
<td>87%</td>
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</table>
### Degree program

<table>
<thead>
<tr>
<th>Areas of study</th>
<th>Required prerequisite courses</th>
<th>Minimum cut-off range</th>
<th>2020 incoming class average</th>
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</thead>
<tbody>
<tr>
<td><strong>Bachelor of Global and International Studies</strong>&lt;br&gt; • Africa and Globalization&lt;br&gt; • Europe and Russia in the World&lt;br&gt; • French and Francophone Studies&lt;br&gt; • Global Development&lt;br&gt; • Global Genders and Sexualities&lt;br&gt; • Global Inequalities and Social Change&lt;br&gt; • Global Law and Social Justice&lt;br&gt; • Global Literature&lt;br&gt; • Global Media and Communication&lt;br&gt; • Global Migration and Transnationalism&lt;br&gt; • Global Politics&lt;br&gt; • Global Religions: Identity and Community&lt;br&gt; • Global and Transnational History&lt;br&gt; • Globalization, Culture and Power&lt;br&gt; • Globalization and the Environment&lt;br&gt; • International Economic Policy&lt;br&gt; • Latin American and Caribbean Studies&lt;br&gt; • Teaching English in Global Contexts&lt;br&gt;</td>
<td>All BGLns:&lt;br&gt; • English (ENG4U)</td>
<td>75-77%</td>
<td>85%</td>
</tr>
<tr>
<td><strong>Bachelor of Health Sciences</strong>&lt;br&gt; • Biomedical Sciences&lt;br&gt; • Disability and Chronic Illness&lt;br&gt; • Environment and Health&lt;br&gt; • Global Health&lt;br&gt; • Health Throughout the Lifespan&lt;br&gt;</td>
<td>• Advanced Functions (MHF4U)&lt;br&gt; • Two credits from Biology (SB14U), Chemistry (SCH4U), Earth and Space Science (SES4U) or Physics (SPH4U) (Calculus [MCV4U] strongly recommended)</td>
<td>85-88%</td>
<td>88%</td>
</tr>
<tr>
<td><strong>Bachelor of Humanities</strong>&lt;br&gt; Option A: Bachelor of Humanities (Honours or Combined Honours)&lt;br&gt; Option B: Bachelor of Humanities and Biology (Combined Honours)&lt;br&gt;</td>
<td>No specific prerequisites</td>
<td>80-84%</td>
<td>89%</td>
</tr>
<tr>
<td><strong>Bachelor of Industrial Design</strong>&lt;br&gt;</td>
<td>• Advanced Functions (MHF4U)&lt;br&gt; • Physics [SPH4U] (Calculus [MCV4U] and courses in visual arts and/or technological design are recommended)</td>
<td>75-77%</td>
<td>87%</td>
</tr>
<tr>
<td><strong>Bachelor of Information Technology</strong>&lt;br&gt; • Information Resource Management (IRM)&lt;br&gt; • Interactive Multimedia and Design (IMD)&lt;br&gt; • Network Technology (NET)&lt;br&gt; • Optical Systems and Sensors (OSS)&lt;br&gt;</td>
<td>• English (ENG4U)&lt;br&gt; • One Math credit (4U)</td>
<td>75-77%</td>
<td>81%</td>
</tr>
<tr>
<td><strong>Bachelor of International Business</strong>&lt;br&gt; • Global Financial Management and Systems&lt;br&gt; • International Marketing and Trade&lt;br&gt; • International Strategy and Human Resources Management&lt;br&gt;</td>
<td>• English (ENG4U)&lt;br&gt; • Advanced Functions (MHF4U)&lt;br&gt; • Calculus (MCV4U)*&lt;br&gt; *Students without Calculus (MCV4U) may be admitted conditionally and must complete MATH 0009 in their first term of study.</td>
<td>80%</td>
<td>87%</td>
</tr>
<tr>
<td><strong>Bachelor of Journalism</strong>&lt;br&gt;</td>
<td>• English (ENG4U)&lt;br&gt; Concentration in Health Sciences:&lt;br&gt; • English (ENG4U)&lt;br&gt; • One Math credit (4U)&lt;br&gt; • Biology (SB14U) or Chemistry (SCH4U)</td>
<td>85-88%</td>
<td>90%</td>
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<tr>
<td>Degree program</td>
<td>Areas of study</td>
<td>Required prerequisite courses</td>
<td>Minimum cut-off range</td>
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<tr>
<td>Bachelor of Journalism and Humanities</td>
<td></td>
<td>• English (ENG4U)</td>
<td>85-88% 92%</td>
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<tr>
<td>Bachelor of Mathematics</td>
<td>• Computational and Applied Mathematics and Statistics*</td>
<td>• Advanced Functions (MHF4U)</td>
<td>78-82% 87%</td>
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<td>• Computer Mathematics</td>
<td>• Calculus (MCV4U)</td>
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<td>• Computer Science and Mathematics*</td>
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<td>• Mathematics and Economics*</td>
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<td>• Mathematics and Practice*</td>
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<td>• Mathematics/ Master of Science</td>
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<td>• Statistics*</td>
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<td>• Statistics and Economics*</td>
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<td>• Statistics and Master of Science</td>
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<tr>
<td>Bachelor of Media Production and Design*</td>
<td></td>
<td>• English (ENG4U)</td>
<td>75-77% 86%</td>
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<td>• One Math credit (4U)</td>
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<tr>
<td>Bachelor of Music*</td>
<td></td>
<td>• No specific prerequisites (English [ENG4U] recommended)</td>
<td>75-77% 85%</td>
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<tr>
<td>Bachelor of Public Affairs and Policy Management</td>
<td>• Communication and Policy Studies*</td>
<td>• No specific prerequisites</td>
<td>83-86% 89%</td>
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<td></td>
<td>• Development Policy Studies*</td>
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<td></td>
<td>• International Policy Studies*</td>
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<td>• Public Policy and Administration*</td>
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<tr>
<td>Bachelor of Science</td>
<td>• Biochemistry*</td>
<td>• Advanced Functions (MHF4U)</td>
<td>78-82% 87%</td>
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<tr>
<td></td>
<td>• Bioinformatics*</td>
<td>• Two credits from Biology (SB4U), Chemistry (SC4U), Earth and Space Science (SES4U) or Physics (SPH4U)</td>
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<tr>
<td></td>
<td>• Biology*</td>
<td>• Calculus (MCV4U)</td>
<td>78-82% 87%</td>
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<td>• Biology and Physics*</td>
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<td>• Computational Biochemistry*</td>
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<td>• Food Science*</td>
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<td>• Interdisciplinary Science and Practice*</td>
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<td>• Neuroscience and Biology*</td>
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<td>• Neuroscience and Mental Health*</td>
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<td>• Earth Sciences*</td>
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<td>• Advanced Functions (MHF4U)</td>
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<td>or Calculus (MCV4U)</td>
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<td>• Two credits from Biology (SB4U), Chemistry (SC4U), Earth and Space Science (SES4U) or Physics (SPH4U)</td>
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<tr>
<td>Bachelor of Social Work*</td>
<td>• No specific prerequisites (English strongly recommended)</td>
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<td>75-80% 87%</td>
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<td>Program index</td>
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<td>Accounting ................................................................. 22</td>
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<td>Disability and Chronic Illness .......................................... 35</td>
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# Provincial requirements

Please see the Ontario admission requirements on pages 76-78 for admission requirements by degree and averages required. Use this chart to see which courses in your province fulfill those prerequisite requirements.

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<th>Alberta, NWT, Nunavut</th>
<th>British Columbia, Yukon</th>
<th>Manitoba</th>
<th>New Brunswick &amp; Labrador</th>
<th>Newfoundland</th>
<th>Nova Scotia</th>
<th>Prince Edward Island</th>
<th>Quebec CEGEP</th>
<th>Saskatchewan</th>
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<tr>
<td><strong>General Requirements</strong></td>
<td>The Ontario Secondary School Diploma (OSSD) with a minimum of six 4U/M courses</td>
<td>High school diploma including five courses numbered 30 or 31</td>
<td>High school diploma including four Grade 12 academic courses</td>
<td>High school diploma including five courses at the 40 level</td>
<td>High school diploma including five academic courses at the Grade 12 level</td>
<td>High school diploma including 10 credits at the 3000 level</td>
<td>High school diploma including five courses numbered 12 academic or advanced</td>
<td>High school diploma including five academic courses at the 6T1 or 6Z1 level</td>
<td>One year of CEGEP with a minimum of 12 academic courses</td>
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<tr>
<td><strong>Prerequisite Equivalencies</strong></td>
<td>Advanced Functions (MHF4U)</td>
<td>Math 30-1 Pre-Calculus 12</td>
<td>Pre-Calculus Math 40S</td>
<td>Pre-Calculus A 120 and B 120</td>
<td>Math 3200</td>
<td>Pre-Calculus 12</td>
<td>Math 621B</td>
<td>Mathematics (201) Calculus 1</td>
<td>Pre-Calculus 30</td>
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<td>Biology (SBI4U)</td>
<td>Biology 30 Anatomy and Physiology 12</td>
<td>Biology 40S</td>
<td>Biology 121/122</td>
<td>Biology 3201</td>
<td>Biology 12</td>
<td>Biology 621A</td>
<td>Biology (101) General Biology</td>
<td>Biology 30</td>
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<td>Calculus (MCV4U)</td>
<td>Math 31 Calculus 12</td>
<td>Calculus 45S</td>
<td>Calculus 120</td>
<td>Calculus 3208</td>
<td>Calculus 12</td>
<td>Math 611B</td>
<td>Mathematics (201) Calculus 1</td>
<td>Calculus 30</td>
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<td>Chemistry (SCH4U)</td>
<td>Chemistry 30 Chemistry 12</td>
<td>Chemistry 40S</td>
<td>Chemistry 121/122</td>
<td>Chemistry 3202</td>
<td>Chemistry 12</td>
<td>Chemistry 621A</td>
<td>Chemistry (202) General Chemistry or Chemistry of Solutions</td>
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<td>English (ENG4U)</td>
<td>ELA 30-1 English 12 or English First Peoples 12</td>
<td>ELA 40S</td>
<td>English 122</td>
<td>English 3201</td>
<td>English 12</td>
<td>English 621A</td>
<td>English (603)</td>
<td>ELA A30 and B30</td>
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<td>Physics 12</td>
<td>Physics 3204</td>
<td>Physics 12</td>
<td>Physics 621A</td>
<td>Physics (203) Mechanics or Electricity and Magnetism</td>
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</table>

**Notes**

For a list of acceptable courses by province: admissions.carleton.ca/apply.
Future opportunities

Carleton University offers a variety of certificate and diploma programs. Students enrolled in these programs are able to benefit from the same university resources and support services as our regular, full-time degree students.

For information regarding admission requirements, visit admissions.carleton.ca/certificates.

Certificates and Diploma Programs available at Carleton University:

- Certificate in Carillon Studies
- Certificate in Human Public Service Studies
- Certificate in Multidisciplinary Studies in Mental Health and Wellbeing
- Certificate in Professional Writing
- Certificate in Science and Policy
- Certificate in Science Communication
- Certificate in the Teaching of English as a Second Language
- Post-Baccalaureate Diploma in Accounting
- Post-Baccalaureate Diploma in Art History
- Post-Baccalaureate Diploma in Cognitive Science
- Post-Baccalaureate Diploma in Economics
- Post-Baccalaureate Diploma in Film Studies
- Post-Baccalaureate Diploma in History and Theory of Architecture
- Post-Baccalaureate Diploma in Professional Writing

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Thinking of grad school? Think Carleton! With a graduate degree from Carleton, you’ll be able to shape your future based on your specific study and research interests. We offer a wide variety of unique graduate programs with many specializations.

Learn more at graduate.carleton.ca/programs.

- Master of Accounting (Mac)
- Master of Applied Business Analytics in Technology Innovation Management (MBA)
- Master of Applied Science (MSc) Aerospace Engineering*
  Biomedical Engineering*
  Civil Engineering*
  Electrical and Computer Engineering*
  Environmental Engineering*
  Human-Computer Interaction
  Mechanical Engineering*
  Sustainable Energy Engineering and Policy Technology Innovation Management
- Master of Architecture (MArch)
- Master of Architectural Studies (MAS)
- Master of Arts (MA) Anthropology
  Applied Linguistics and Discourse Studies
  Art and Architectural History
  Canadian Studies
  Communication
  Economics
  English
  European, Russian and Eurasian Studies
  Film Studies
  French and Francophone Studies
  Geography
  History
  Human-Computer Interaction
  International Affairs
  International Affairs/Law Doctor**
  Legal Studies
  Linguistics
  Migration and Diaspora Studies
  Music and Culture
  Northern Studies
  Philosophy
  Political Economy
  Political Science
  Psychology
- Master of Business Administration (MBA)
- Master of Business Administration (MBA) in Shanghai
- Master of Computer Science (MCS)**
- Master of Design (MDes)
- Master of Entrepreneurship in Technology Innovation Management (MEnt)
- Master of Engineering (MEng)
  Aerospace Engineering*
  Biomedical Engineering*
  Civil Engineering*
  Electrical and Computer Engineering*
  Environmental Engineering
  Infrastructure Protection and International Security
  Mechanical Engineering*
  Sustainable Energy Engineering and Policy Technology Innovation Management
- Master of Information Technology
  Computer Science
  Network Technology
  Digital Media
- Master of Infrastructure Protection and International Security (MIPIS)**
- Master of Journalism (MJ)
- Master of Philosophy and Nonprofit Leadership (MPNL)
- Master of Political Management (MPM)
- Master of Public Policy and Administration (MPPA)***
- Master of Science (MSc)
  Biology*
  Chemistry*
  Earth Sciences*
  Geography (Physical Geography)
  Health Sciences
  Health Science, Technology and Policy Management
  Mathematics and Statistics*
  Neuroscience
  Northern Studies
  Physics*
- Master of Social Work (MSSW)
- Doctor of Philosophy (PhD)
  Aerospace Engineering*
  Anthropology
  Applied Linguistics and Discourse Studies
  Architecture
  Biology*
  Biomedical Engineering*
  Canadian Studies***
  Chemistry*
  Civil Engineering*
  Cognitive Science
  Communication
  Computer Science*
  Cultural Mediations
  Earth Sciences*
  Economics*
  Electrical and Computer Engineering*
  English
  Environmental Engineering*
  Ethics and Public Affairs
  Geography
  Health Sciences
  History
  Information Technology
  International Affairs
  Legal Studies
  Linguistics, Language Documentation and Revitalization Management
  Mathematics and Statistics*
  Mechanical Engineering*
  Neuroscience
  Physics*
- Master of Entrepreneurship in Technology Innovation Management (MEnt)
- Master of Science (MSc)
  Biology*
  Chemistry*
  Earth Sciences*
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  Chemistry*
  Earth Sciences*
  Geography (Physical Geography)
  Health Sciences
  Health Science, Technology and Policy Management
  Mathematics and Statistics*
  Neuroscience
  Northern Studies
  Physics*
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You can experience our campus at any point through our regular virtual tours, which include classrooms, the university library, our underground tunnel system, athletics facilities and more. [virtualtour.carleton.ca](http://virtualtour.carleton.ca)

Our on-campus walking tours usually take 1.5 hours and are led by current Carleton students. Please visit our website to learn more about these tours and when they are being offered.

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There are so many ways to connect with Carleton! We are offering several online events to connect you to Carleton and answer your questions. Please also continue to visit our website to find out about on-campus events we may be hosting.

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Ottawa is a wonderful place to study, offering you opportunities you won’t find anywhere else. Studying in a G7 capital city gives Carleton students unparalleled advantages, such as exceptional co-op and research opportunities that will enrich your university experience.

Carleton's self-contained campus is bordered by the Rideau Canal, the Rideau River and the surrounding community. It is located a short ride from Parliament Hill and Ottawa's downtown core. This complementary blend of city life and nature, culture and heritage, business and government makes Carleton such a unique place to study and learn.

Travel to Ottawa
As the capital of Canada, Ottawa is well connected locally, nationally and internationally. Ottawa is home to an international airport, a train station and is serviced by local public transit. Ottawa is a 2-hour drive from Montreal, 4 1/2 hour drive from Toronto and a 1-hour drive to the state of New York.
Come and visit Carleton!