

Queen's School of Computing

# Graduate Student Handbook



2021-22





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## Note to the 2021-22 Incoming Class

Dear all,

As you're no doubt aware, Canada and other countries have been dealing with Covid-19 and its effects for the majority of 2021. Starting graduate studies at this time, in the midst of a global pandemic, is a unique challenge to say the least.

This handbook was written a couple of years ago in a context where students, faculty, and staff could meet face-to-face; where members of the university community could access buildings and campus resources in person; and where friends went out for food, drinks, and entertainment without needing to wear a mask or keep physically distanced from others.

While the information in this handbook still applies for the day when we can do all of these things in person once again, things will remain different and distanced for at least the first few months of the academic year. To support us as we navigate this weird time, the university and other organizations have developed a number of resources that we can access if and when we need them. Below, you'll find a list of some of these resources.

- Queen's University: <https://www.queensu.ca/covidinfo/>
- Queen's School of Computing: <https://www.cs.queensu.ca/covid19/>
- KFL&A Health Unit: <https://www.kflaph.ca/en/healthy-living/novel-coronavirus.aspx>
- Government of Ontario: <https://covid-19.ontario.ca>

You should also know a few other things. Face masks are mandatory in all public spaces, both on campus and in Kingston. Queen's requires all students to be fully vaccinated to be on campus. Covid-19 testing is available to anyone who wishes to be tested, even if you don't have an Ontario health card. The testing site is currently located at the Leon's Centre in downtown Kingston (1 Tragically Hip Way), but the health unit is also looking into opening a testing site on Queen's campus. Finally, the Government of Canada has released a "Covid Alert" contact-tracing app for both iOS and Android, and it can be downloaded freely from your phone's App Store.

Lastly, we're all in this together. If you ever feel the need to reach out to anyone, then reach out: to fellow grad students, to the GCS executive, to your supervisor, to your course instructor, to an SGPS peer advisor, or to friends and family. You can find contact information for services such as the GCS Discord channel, the SGPS Peer Advisor Program, and Queen's Student Wellness Services in the pages of this handbook.

Best of luck as you begin your grad studies, and welcome to the Queen's School of Computing!

# Welcome

## ...to Kingston

Kingston is a city in eastern Ontario, roughly halfway between Toronto, Ontario and Montreal, Quebec. It is on the eastern edge of Lake Ontario, adjacent to both the Cataraqui River and the St. Lawrence River.

Kingston had the honour of being the first capital of the Province of Canada from 1841 to 1844, before Canada became a nation. Kingston was a military stronghold during the 19th century, and it remains a military city to this day with both current and historic military installations across the city. Due to its history and its many old stone buildings, Kingston is sometimes called the “Limestone City”.

Kingston is well-connected to the rest of the province. Highway 401, the busiest highway in North America, is located on the northern edge of Kingston. Train service is provided by Via Rail to Toronto, Ottawa, and Montreal. Air service is provided by Air Canada from Kingston’s Norman Rogers Airport to Toronto’s Pearson Airport. A ferry runs from downtown Kingston to Wolfe Island.







Kingston has two universities and one college: Queen's University, the Royal Military College of Canada, and St. Lawrence College.

## ...to Queen's University

Queen's University, founded in 1841, is one of the oldest universities in Canada. The student population is around 26,000, of whom about 2,000 are enrolled in graduate studies. About 100 of these graduate students are registered in the School of Computing.

The main campus of the university is bordered to the south by Lake Ontario, to the east by City Park, and to the north and west by student residences and private housing. Downtown Kingston is about 10-15 minutes away from campus by foot. There is also a "west campus", located approximately 20 minutes to the west of main campus by foot, which is where the Faculty of Education and some student residences are located.

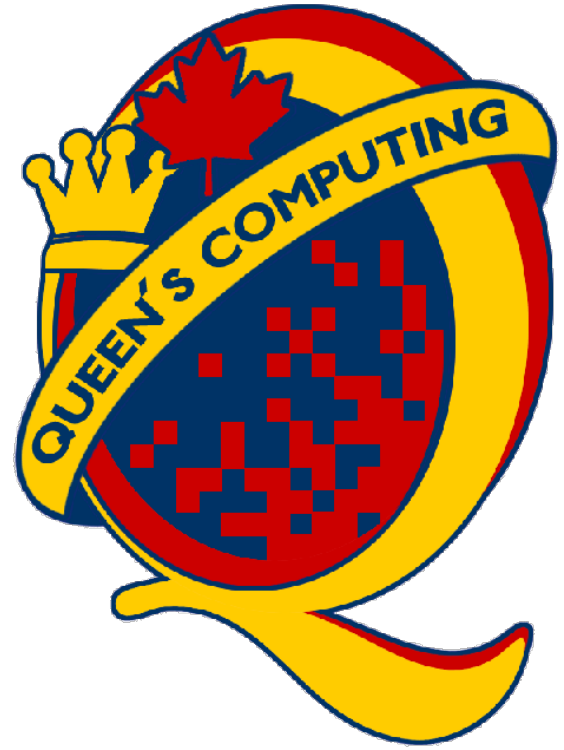
In addition to the library and archives system, Queen's University also has a number of museums. The Agnes Etherington Art Centre is located in the center of campus along University Avenue. The Miller Museum of Geology is located in Miller Hall on Union Street. The Museum of Health Care is located on the grounds of Kingston General Hospital at the south end of campus.



## ...to the School of Computing

The School of Computing is located in Goodwin Hall on the northeast edge of main campus. A "technology centre" provides an integrated set of buildings linking the School of Computing to both the Department of Electrical and Computer Engineering in Walter Light Hall and the Integrated Learning Centre in Beamish-Munro Hall. School of Computing administrative offices are located on the 5th floor of Goodwin Hall.

The School of Computing was established in 1969, and it has an academic staff with considerable teaching and research experience. In addition to its graduate programs, the School offers an honours Bachelor's degree with a concentration in computing.



Reading material. This handbook is only meant to get you started with some basic information about the School of Computing and graduate life. For more information, including school policies and regulations, see the School of Computing Graduate Studies





# Faculty and Staff

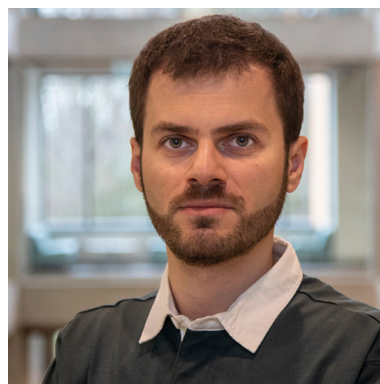
## Faculty Members



Bram Adams  
Associate Professor



Selim Akl  
Professor



Furkan Alaca  
Assistant Professor



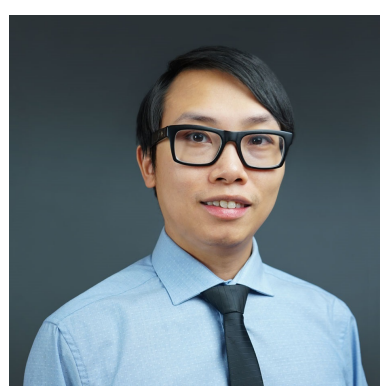
Dorothea Blostein  
Professor



Yuanzhu Chen  
Assistant Professor



Robin Dawes  
Associate Professor



Steven Ding  
Assistant Professor



Jeurgen Dingel  
Professor, Undergraduate  
Chair



Dave Dove  
Lecturer, Continuing



Qingling Duan  
Assistant Professor,  
Queen's National Scholar



Jana Dunfield  
Assistant Professor



Mariam El Mezouar  
Assistant Professor



Randy Ellis  
Professor, Queen's  
Research Chair



Gabor Fichtinger  
Professor, Canada  
Research Chair



Sidney Givigi  
Associate Professor



Nick Graham  
Professor





Ahmed Hassan  
Professor, Canada  
Research Chair, NSERC  
RIM Software Engineering



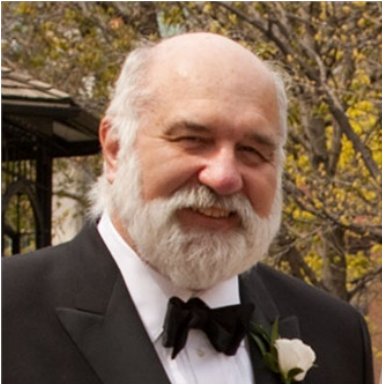
Hossam Hassanein  
Professor and Director



Ting Hu  
Assistant Professor



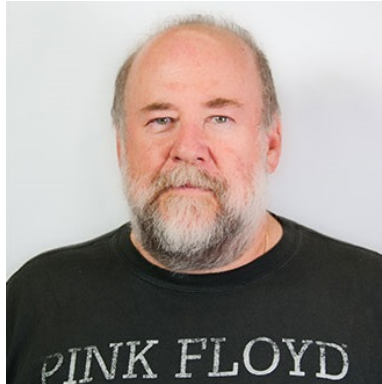
David Lamb  
Associate Professor



Richard Linley  
Lecturer, Continuing



Burton Ma  
Associate Professor



Alan McLeod  
Associate Professor,  
Continuing



Parvin Mousavi  
Professor



Christian Muise  
Assistant Professor



Sara Nabil  
Assistant Professor



Wendy Powley  
Associate Professor



Kai Salomaa  
Professor



Amber Simpson  
Associate Professor,  
Canada Research Chair



David Skillicorn  
Professor



Sameh Sorour  
Assistant Professor



James Stewart  
Professor





Catherine Stinson  
Assistant Professor,  
Queen's National Scholar



Yuan Tian  
Assistant Professor



Farhana Zulkernine  
Associate Professor



Mohammad Zulkernine  
Professor, Graduate Chair,  
and Canada Research





## Emeriti



James Cordy  
Professor Emeritus



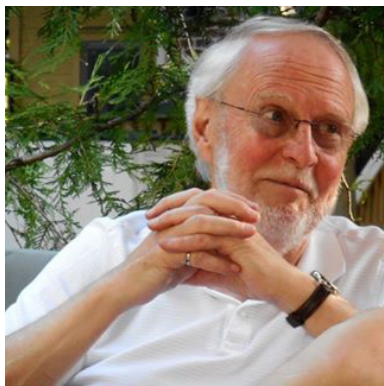
Bob Crawford  
Professor Emeritus



Janice Glasgow  
Professor Emerita



Mike Jenkins  
Professor Emeritus



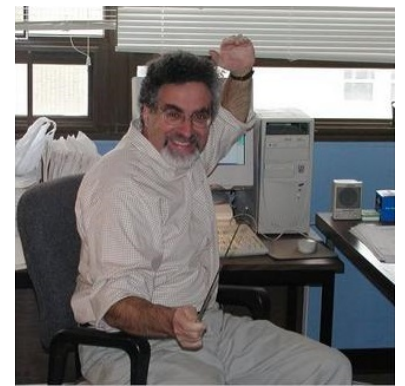
Glenn MacEwen  
Professor Emeritus



Pat Martin  
Professor Emeritus



David Rappaport  
Professor Emeritus



Bob Tennant  
Professor Emeritus





## Cross-Appointed Faculty Members

Gunnar Blohm	Professor, Dept. of Biomedical and Molecular Sciences
Thomas Dean	Associate Professor, Dept. of Electrical and Computer Engineering
Michael Greenspan	Associate Professor, Dept. of Electrical and Computer Engineering
Keyvan Hashtrudi-Zaad	Professor, Dept. of Electrical and Computer Engineering
Diane Kelly	Professor, Royal Military College
Scott Knight	Associate Professor, Royal Military College
David Maslove	Assistant Professor, Dept. of Medicine
Joshua Mozersky	Associate Professor, Dept. of Philosophy
Aboelmagd Noureldin	Professor, Royal Military College
Anna Panchenko	Professor and Canada Research Chair, Dept. of Pathology and Molecular Medicine
Jordan Poppenk	Assistant Professor, Dept. of Psychology
Damian Redfearn	Professor, Dept. of Medicine
Francois Rivest	Associate Professor, Royal Military College
John Rudan	Professor and Head, Dept. of Surgery
Karen Rudie	Professor, Dept. of Electrical and Computer Engineering
Nancy Salay	Associate Professor, Dept. of Philosophy
Louise Winn	Professor, Dept. of Biomedical and Molecular Sciences
Gavin Winston	Associate Professor, Dept. of Medicine
Ying Zou	Professor and Canada Research Chair, Dept. of Electrical and Computer Engineering

Talking to Faculty. Some grad students, especially those from outside of North America, feel like professors are only around to teach you and to tell you what to do from their ivory tower. This is certainly not the case! Professors are people just like grad students. Don't feel intimidated or afraid to speak with a professor. You are their colleague.

## Technical and Administrative Staff



Ben Hall  
Technical Manager



Zack Babcock  
Technical Specialist



Doug Martin  
Systems Specialist



Sarah-Jane Whittaker  
Information and Technical  
Analyst



Aaron Visser  
Systems Analyst



Robin Tippet  
School Manager



Nancy Churchman  
Research Manager



Erin Gunsinger  
Senior Secretary



Noreen Haun  
Research Administrative  
Assistant



Karen Knight  
Undergraduate Program  
Assistant



Deborah Lewis  
CREATE Administrative  
Coordinator



Carly Napier  
Administrative Secretary



Debby Robertson  
Graduate Program  
Assistant



Aysha Tayab-Rätsep  
Marketing and  
Communications  
Coordinator



Laurie Truman  
Financial Assistant





## Research Groups

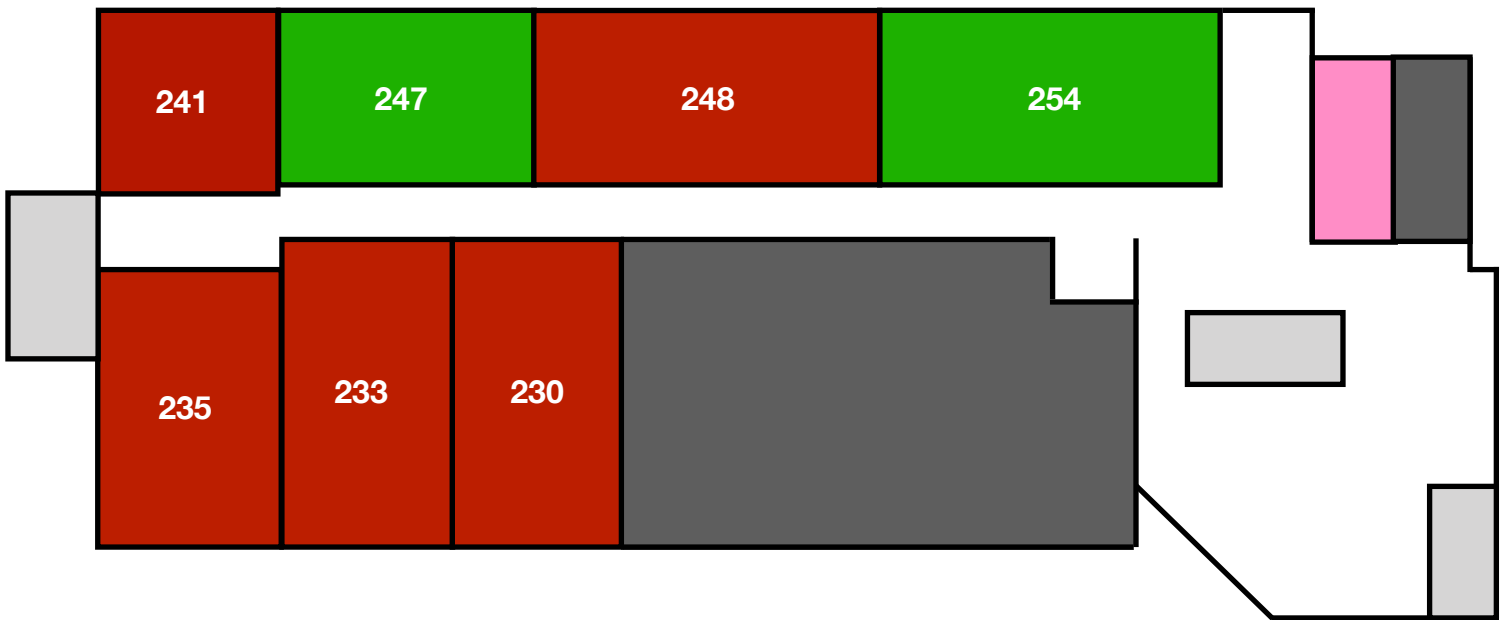
Autonomous Robotics Research Lab Director: Sidney Givigi	Flemming Hall, Fourth Floor
Big-Data Analytics and Management Laboratory (BAMLab) Director: Farhana Zulkernine	Goodwin Hall, Room 633
Computational Geometry Laboratory Director: David Rappaport	Goodwin Hall, Room 532
Computational Genomics Laboratory (Duan Lab) Director: Qingling Duan	Botterell Hall, 5th Floor
Connected & Autonomous Systems & Technologies Lab (CASTLE) Director: Sameh Sorour	Flemming Hall, Fourth Floor
Discrete Event Control Systems Group Director: Karen Rudie	Walter Light Hall, Room 414
EQUIS Collaborative Gaming Technology Laboratory Director: Nick Graham	Jackson Hall, Third Floor
Formal Languages and Automata Theory Group Director: Kai Salomaa	Goodwin Hall, Room 456A
iStudio Director: Sara Nabil	Jackson Hall, Third Floor
Joints and Connective Tissues Laboratory Director: James Stewart	Goodwin Hall, Room 732
Lab on Maintenance, Construction and Intelligence of Software (MCIS) Director: Bram Adams	TBA
Laboratory for Percutaneous Surgery (Perk Lab) Director: Gabor Fichtinger	Goodwin Hall, Room 747
Machine Learning and Biocomputing (MIB) Laboratory Director: Ting Hu	Goodwin Hall, Room 627
Medical Informatics (Med-i) Laboratory Director: Parvin Mousavi	Goodwin Hall, Room 753
Modeling and Analysis in Software Engineering (MASE) Group Director: Juergen Dingel	Goodwin Hall, Room 624
Mu Lab Director: Christian Muise	Goodwin Hall, Room 627
Parallel and Unconventional Computation Group Director: Selim Akl	Goodwin Hall, Room 456A
Queen's Reliable Software Technology (QRST) Group Director: Mohammad Zulkernine	Goodwin Hall, Room 631
Reliable and Intelligence Software Engineering (RISE) Research Lab Director: Yuan Tian	TBA

Simpson Lab Director: Amber Simpson	
Smart Information Management Laboratory Director: David Skillicorn	Goodwin Hall, Room 528
Software Analysis and Intelligence Lab (SAIL) Director: Ahmed Hassan	133 Princess Street
Software Reengineering Research Group Director: Ying Zou	Goodwin Hall, Room 731
Telecommunications Research Laboratory (TRL) Director: Hossam Hassanein	Flemming Hall, Fourth Floor
Tensegrity Research Group Director: Dorothea Blostein	Goodwin Hall, Room 720
Theory and Practice of Programming Languages (TPPL) Director: Jana Dunfield	TBA

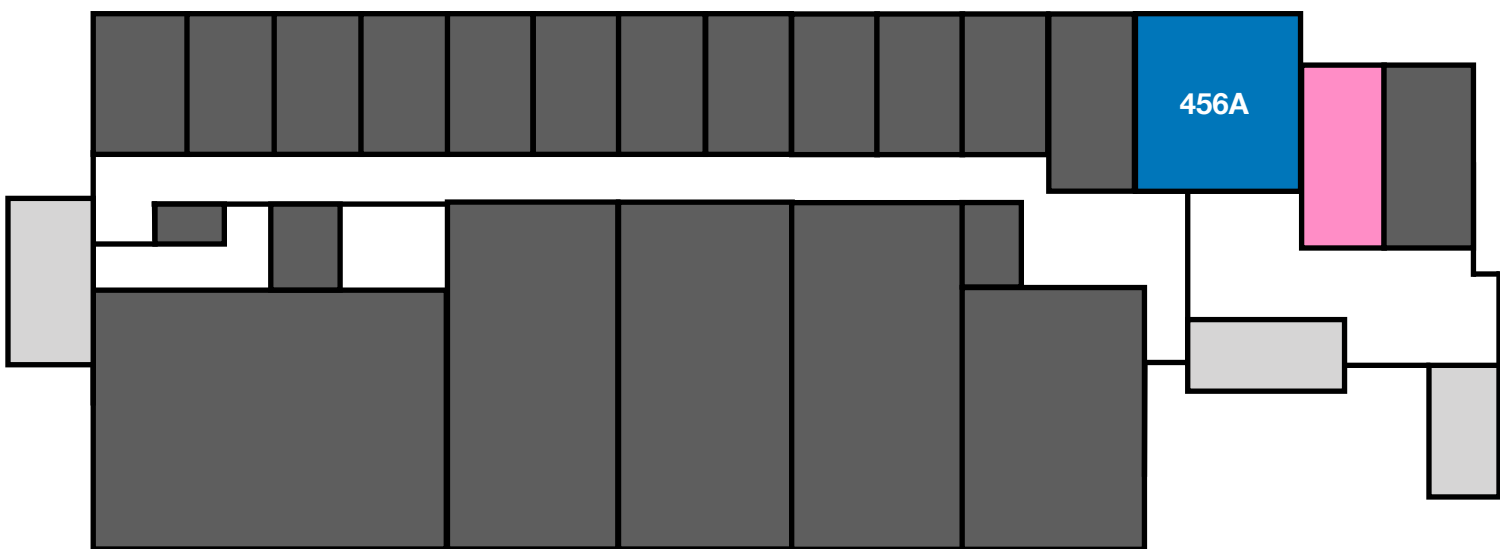


Building Maps

Goodwin Hall, Second Floor



Goodwin Hall, Fourth Floor



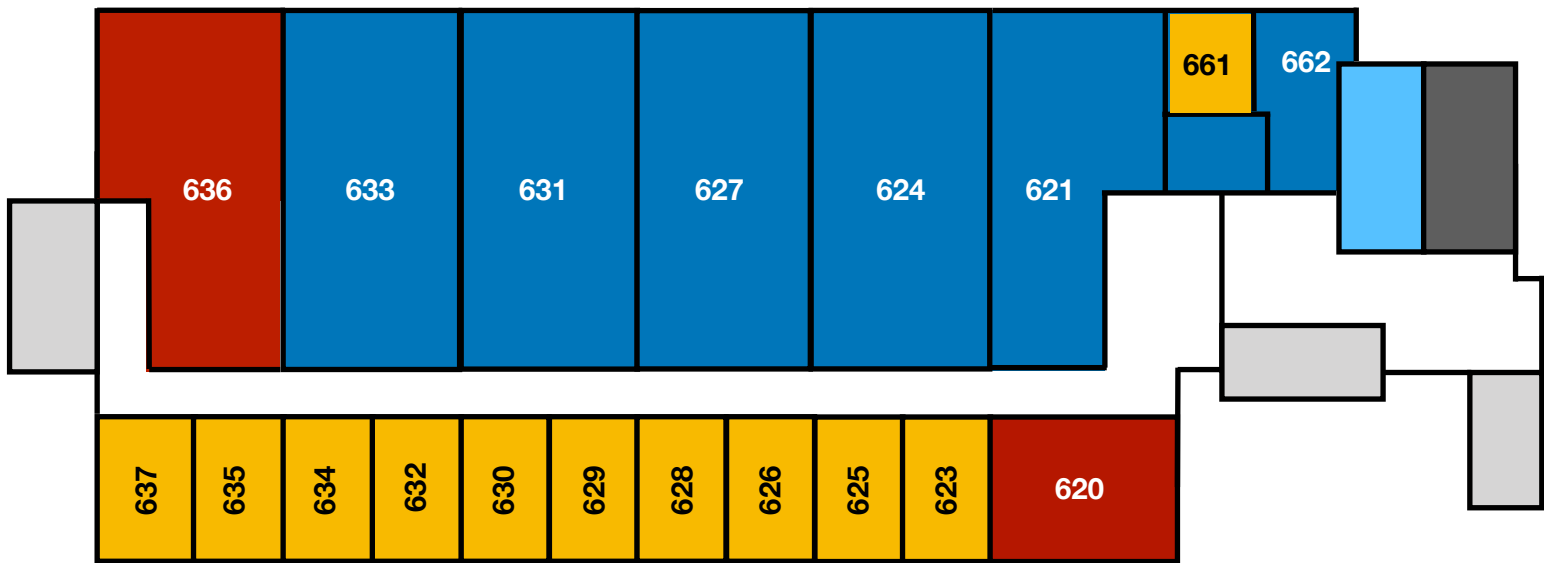
Legend

- School/administration
- Faculty/staff office
- Laboratory
- Classroom
- Washrooms

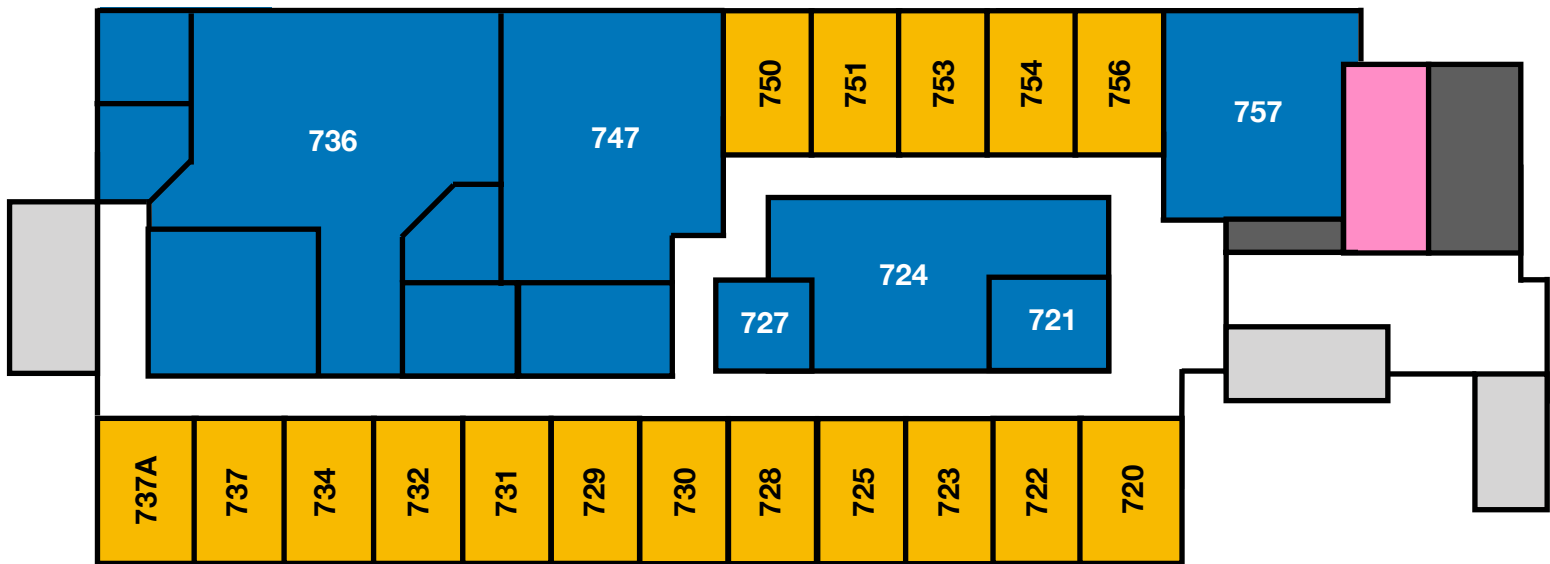
Goodwin Hall, Fifth Floor



Goodwin Hall, Sixth Floor



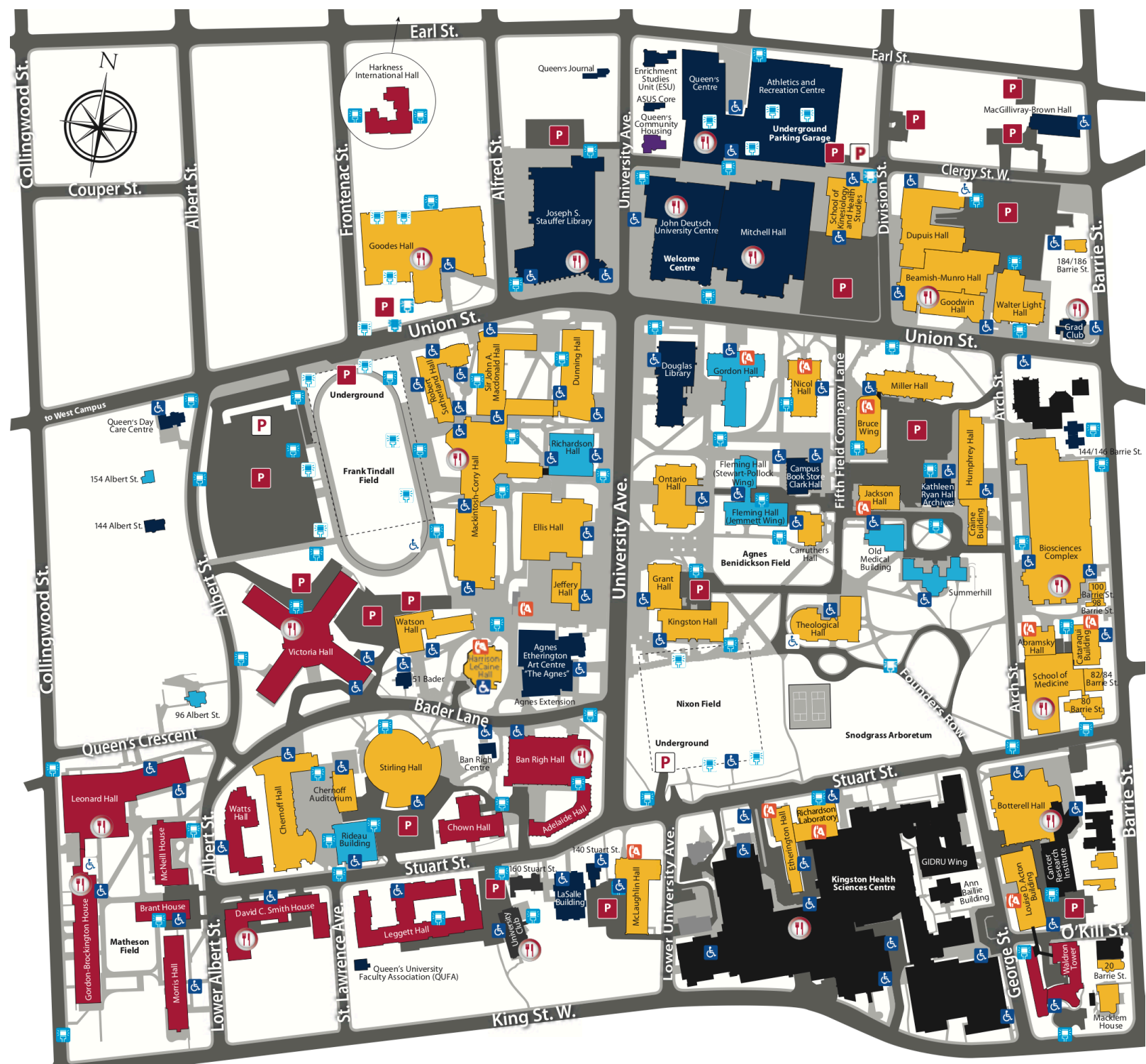
Goodwin Hall, Seventh Floor





# University and City Maps

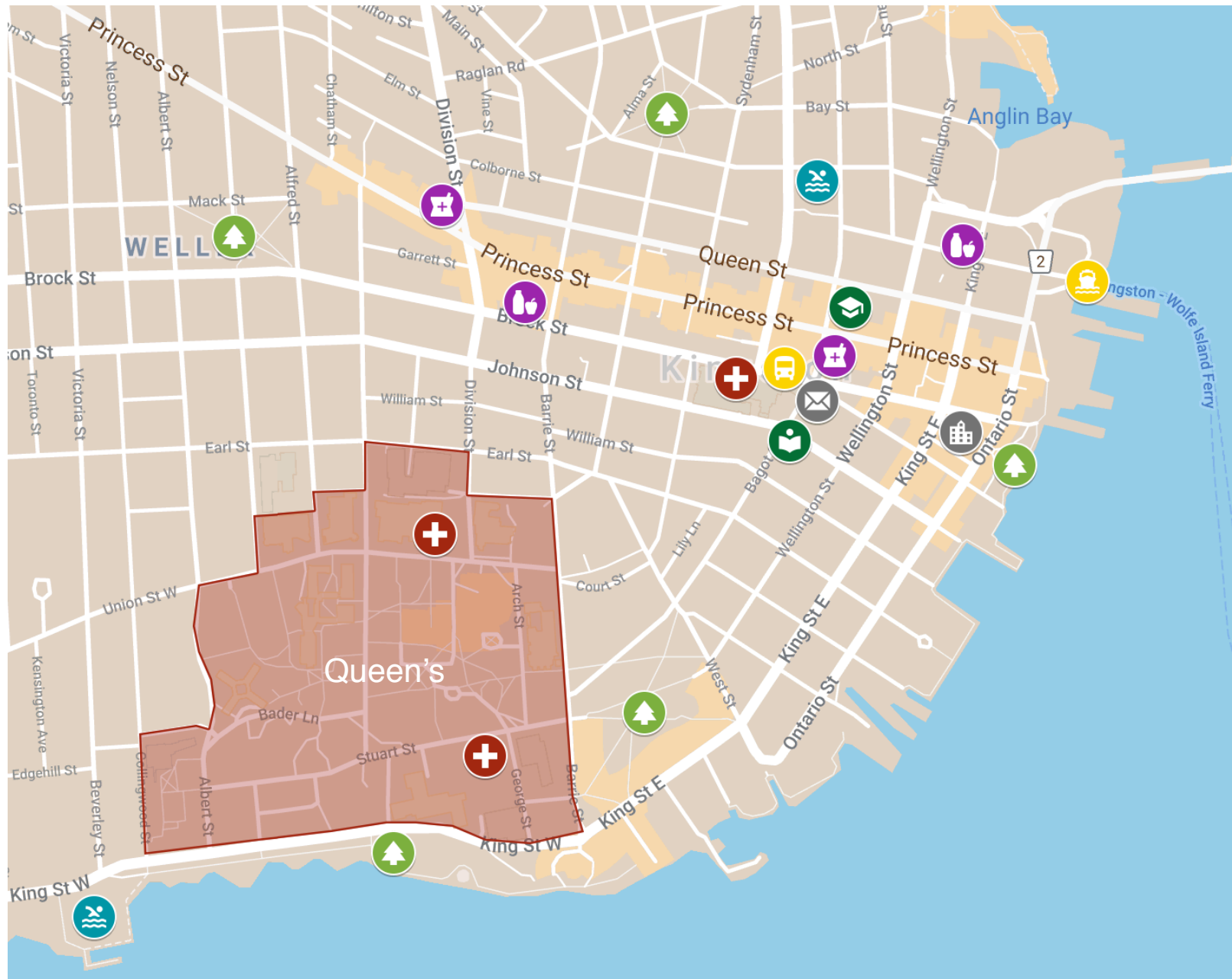
## Queen’s University (Main Campus)














### Legend

- Academic/Faculty
- Student Life/Student Services
- Non-Queen's
- Administration
- Residence

## City of Kingston (Downtown)



### Legend

	Hospital/Clinic		Ferry to Wolfe Island		Public Swim Area
	SAIL Lab (Computing)		Kingston City Hall		Grocery Store
	Public Library		Post Office		Pharmacy
	Downtown Transfer		Public Park		



# University Resources

## Libraries

Queen's University has two main libraries: Stauffer Library and Douglas Library. Both of these libraries are located at the intersection of University Avenue and Union Street.

Computing Science textbooks, monographs, journals and technical reports from dozens of universities and research institutes are all housed in Douglas Library.

Other books and periodicals of interest, particularly for Mathematics and Psychology, may be found in Stauffer Library or in other branch libraries around campus.

Library hours vary based on day and season. For more details, visit the library's website at <http://library.queensu.ca>.

Library Off-Campus VPN. You can access journal articles, conference proceedings, and some books from off-campus by logging into the Queen's Library VPN at



## University Computing Facilities

Queen's Information and Technology Services (ITS) manages all technical systems outside of the School of Computing. ITS is also responsible for the NetID system, Solus, MyQueensU, and OnQ.

The IT Support Centre is located in Mackintosh-Corry Hall, room B205. The support team can also be contacted via web form: <https://www.queensu.ca/its/forms/itsc/helpform/>.

All issues relating to School of Computing equipment should be directed to the school's technical staff. If you aren't sure who to contact, the school's technical staff will be happy to help.

## News and Communications

The official university newspaper is the Queen's Gazette. It is published in print and online at <https://www.queensu.ca/gazette/>.

The Queen's Journal is the student-run campus newspaper. It is also published in print and online at <https://www.queensjournal.ca>.

## Campus Bookstore

The university campus bookstore carries course textbooks and other reading material, as well as stationery and office supplies. They also have a selection of sweaters, shirts, and other Queen's apparel for sale. The bookstore is located in Clark Hall, and is usually open M-F 9am-6pm.

## Health and Safety

The Department of Environmental Health and Safety is responsible for all aspects of maintaining a safe and healthy work environment at Queen's University. Their website can be found at <https://www.safety.queensu.ca>.

As of June 1, 2019, smoking, vaping, and any other use of tobacco or cannabis products is prohibited on all Queen's University property. For more details about Queen's smoke-free campus policy, see <https://www.queensu.ca/risk-and-safety/smoke-free-queens>.



SGPS Peer Academic Advisor Program. The Peer Academic Advisor Program is a free, confidential service that provides students with advice and support from a safe, non-judgmental fellow grad student. To get in

## Health Insurance

Domestic students should be covered by either their provincial health plan or a private health plan. Domestic students who are not covered by a plan, as well as all International students who do not have a similar health plan, are required to enrol in the University Health Insurance Program (UHIP).

## Student Organizations



Graduate Computing Society. The Queen's Graduate Computing Society (GCS) represents the interests of graduate students in the School of Computing. The GCS distributes information, organizes regular social events, and promotes an active and engaging environment for graduate students.

Some events held by the GCS in the past include trivia nights, pub nights, potlucks, day trips, sports events, bowling, and paint nights.



Current GCS executives are listed below. Students can get involved with the GCS by running in the annual election, which is held at the beginning of September. For more information, see our website at <http://flux.cs.queensu.ca/gcs/>.

Maram Assi	President	<a href="mailto:maram.assi@queensu.ca">maram.assi@queensu.ca</a>
Victoria Armstrong	Vice-President (Operations)	<a href="mailto:victoria.armstrong@queensu.ca">victoria.armstrong@queensu.ca</a>
Kathleen Abols	Vice-President (University Affairs)	<a href="mailto:kathleen.abols@queensu.ca">kathleen.abols@queensu.ca</a>



Society of Graduate and Professional Students. The Society of Graduate and Professional Students (SGPS) is the university-level student society for all graduate students, law students, and education students. The SGPS represents and advocates for graduate students at all levels of university administration, as well as to the municipal, provincial, and federal governments.

Contact information for the 2021-22 SGPS executives is provided below. Students can get involved with the SGPS by attending general meetings (announced once per term) or by running in the annual election, which is held in the winter term. Students can also contact the school's SGPS Liaison Officers in the GCS with any questions or concerns.

To know more, check SGPS website <https://sgps.ca/>

Justine Aman	President	<a href="mailto:president@sgps.ca">president@sgps.ca</a>
Anthony Lomax	Vice-President (Community)	<a href="mailto:vp.community@sgps.ca">vp.community@sgps.ca</a>
Courtney Bannerman	Vice-President (Finance and Services)	<a href="mailto:vp.finance@sgps.ca">vp.finance@sgps.ca</a>
Rohit Shukla	Vice-President (Graduate)	<a href="mailto:vp.graduate@sgps.ca">vp.graduate@sgps.ca</a>
Jennifer Li	Vice-President (Professional)	<a href="mailto:vp.professional@sgps.ca">vp.professional@sgps.ca</a>



PSAC Local 901. The Public Service Alliance of Canada (PSAC) is the union representing teaching assistants, teaching fellows, research assistants, and postdoctoral fellows at Queen's University.

Our union works on behalf of students and fellows to ensure that students are safe and healthy at work, are fairly paid, and are fairly represented during labour negotiations, among other things. Union members also provide support to employees at other organizations who are going through labour disputes.

Contact information for the 2021-22 union executives is provided below. Students may also get involved with the union by joining a committee or by acting as a department steward.

To know more, check the union website <https://psac901.org/>

Astrid Hobill	President	<a href="mailto:president@psac901.org">president@psac901.org</a>
Doug Yearwood	Vice-President (Community Relations)	<a href="mailto:vpc@psac901.org">vpc@psac901.org</a>
Ramjee Kandel	Vice-President (Postdoctoral Scholars)	<a href="mailto:vppd@psac901.org">vppd@psac901.org</a>
Canan Sahin	Co-Chief Steward	<a href="mailto:chiefsteward@psac901.org">chiefsteward@psac901.org</a>
Prerna Subramanian	Equity Officer	<a href="mailto:equityofficer@psac901.org">equityofficer@psac901.org</a>
Brittany Bonnis	Information Officer	<a href="mailto:info.officer@psac901.org">info.officer@psac901.org</a>
Ethan Mitchell	Treasurer	<a href="mailto:treasurer@psac901.org">treasurer@psac901.org</a>

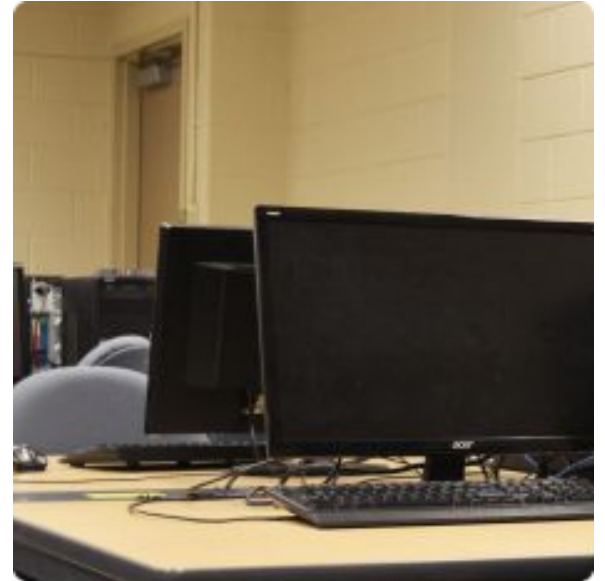


## School Resources

### Office and Lab Space

All full-time students are provided with office or lab space. Currently most offices are shared by four students, although some of the larger offices have a larger population.

Access to Goodwin Hall and to offices/labs is facilitated through the use of iButtons. iButton setup and distribution is handled by School of Computing technical staff. Student cards cannot be tapped to unlock doors.



### Lounge and Meeting Space

There is a common work and meeting space in Goodwin Hall, room 636. A number of cubicles, seats, and lockers are available for students to complete work or collaborate on projects.

A lounge and coffee room area is maintained in Goodwin Hall, room 620. This is open to all staff and graduate students in the School. A microwave, sink, and kettle is also available in

Coffee breaks. The school holds a twice-weekly coffee break, usually on Tuesday and Thursday mornings, in the 6th floor lounge. Stop by for some coffee, tea, and hot chocolate... and occasionally a sweet treat.

this space.

### Postal Mail

All graduate students have access to mail services on campus. Incoming mail can be sent to the School of Computing, and once it is received at the main office, it will be placed in the graduate student mailbox on the 7th floor of Goodwin Hall. Large packages or bundles of mail are usually held in the main office, and students will be contacted when it arrives.

Mail is usually picked up from and delivered to Goodwin Hall in the early morning.

Incoming and outgoing mail is managed by Queen's Postal Services. More information, including rules and regulations for sending mail, can be found at their website: <http://www.queensu.ca/postalservices/>.

General postal mail (that is, not university-related) is handled by Canada Post. The main post office is located downtown at the intersection of Brock and Bagot Streets. Smaller post offices are sometimes located within pharmacies and other stores.

## School Committees

The School of Computing has a number of committees consisting of faculty, staff, and students. The most important committees to most grad students are the School Council, the Undergraduate Committee, and the Graduate Committee. Questions or concerns about the School of Computing at large can be directed to the School Council, while questions about graduate life can be directed to the Graduate Committee.

School Council Chair: Hossam Hassanein	Responsible for all official school policy and direction. All members of the school may attend. Meetings are usually held on the first Monday of each month at 3:30pm.
Undergraduate Committee Chair: David Lamb	Responsible for planning and implementing all curriculum design, evaluation and implementation for all undergraduate programs and courses of the school.
Graduate Committee Chair: Mohammad Zulkernine	Responsible for planning and implementing all graduate programs of the school.

## Equity, Diversity, and Inclusion (EDI)

As the School of Computing moves to remote teaching in the fall 2020 term, equity, diversity, and inclusion (EDI) become key considerations. The School of Computing has asked instructors to remain open and flexible to accommodate students during these difficult times. As a result, the School of Computing developed the following list of practices for instructors:

1. Include a statement of your commitment to EDI in your course syllabi. Discuss how you aim to create an inclusive and equal learning environment for the course and acknowledge the diversity of students. Also request that students be respectful while participating online discussions and communicating with their peers, TAs, and the instructor.
2. Embed EDI considerations in your course design. How can you help all students to succeed? Be considerate and accommodating to those who may lack adequate physical resources necessary for remote learning, who are in different time zones and who may have family responsibilities while learning from home. Record any synchronous sessions for students who are unable to attend.
3. Respect and value all students with different identities, religions and traditions.
4. With the lack of in person contact, it is even more important than ever to be mindful of your choice of words and how they are delivered so as ensure that no student or group of students feels excluded.
5. Survey students on their access to the course and reading material, and offer students alternatives if difficulties are identified. Ensure that all content is accessible by all



students. Recognize that students in other countries or with low bandwidth may have trouble accessing the course materials.

6. Some students may feel isolated and alone. Think of ways to connect and motivate your students.
7. Direct students with any EDI related concerns to the Equity, Diversity and Inclusion Committee.

The EDI Committee can be contacted by email at [edi@cs.queensu.ca](mailto:edi@cs.queensu.ca). You are always welcome to reach out with questions, comments, or concerns.

The EDI Committee is comprised of the following members:

- Wendy Powley, chair
- Jana Dunfield
- Noreen Haun
- Ting Hu
- Catherine Stinson
- Renee Chen, undergraduate representative
- Chris Keeler, graduate representative

## Contacts

Each member of the school's administrative staff specializes in a particular area. For any of the following issues, contact that person first.

Nancy Churchman	Research participant agreements, research confidentiality agreements, research consent-to-disclose agreements
Erin Gunsinger	Reception and general inquiries, photocopying and account/equipment maintenance, mail sorting, booking school laptops and data projectors
Karen Knight	Undergraduate inquiries, undergraduate admissions/pre-registration/registration, undergraduate TA contracts, undergraduate examinations and grades, crisis assistance
Carly Napier	Point of contact for the Director of the School of Computing, meeting room bookings, school seminars, scheduling, appointment coordination, access to school faculty files
Debby Robertson	Graduate inquiries, graduate admissions/pre-registration/registration, graduate RA and TA contracts, graduate grades, NSERC/OGS/other awards, crisis assistance
Laurie Truman	Access to school facilities, school operating accounts, research account administration, operating account administration

Grad student chat. While most of your professional communication will be sent through email, sometimes it's nice to chat in a less formal setting. That's why the GCS set up a Discord server just for grad students.

You can access it through the following link:

<https://discord.gg/gUVJAK5>

You can also follow GCS [Instagram](#) and [Facebook](#) accounts



# Graduate Courses

Master's students following the research pattern may take any four graduate courses as long as these are approved by their supervisor and/or the Coordinator of Graduate Studies. Master's students following the project or coursework pattern degree must choose their courses according to the current distribution requirements.

PhD students must fulfill their token requirement as determined by their supervisor, their supervisory committee, and the school's PhD committee.



Graduate students taking a graduate course offered jointly with an advanced undergraduate course are expected to do the amount of work normally required to earn a credit in a graduate course. Graduate students in the School of Computing may include in their programs relevant courses from other departments such as Electrical Engineering, Psychology, Mathematics, or the School of Business.

## Course Areas

The following table shows examples of courses frequently offered by the School of Computing, ordered according to subject area. Not all courses offered by the School of Computing are listed in this table, and not all courses listed in this table may be offered at the same time.

Theory of Computation	862, 865, 868, 869, 879, 871, 872, 876, 879
Computer Systems	825, 833, 834, 835, 836, 837, 838, 841, 842, 845, 846, 847, 848, 853, 858, 860, 877, 880, 883
Applications Within Computing	832, 839, 850, 852, 854, 855, 856, 857, 859, 861, 864, 873, 874, 875, 878, 881, 882, 886, 888
Other	885, 897, 898, 899, 999

To check the courses offered during this academic year, please refer to the following link.  
<https://www.cs.queensu.ca/students/graduate/courses/>



## Technical Support

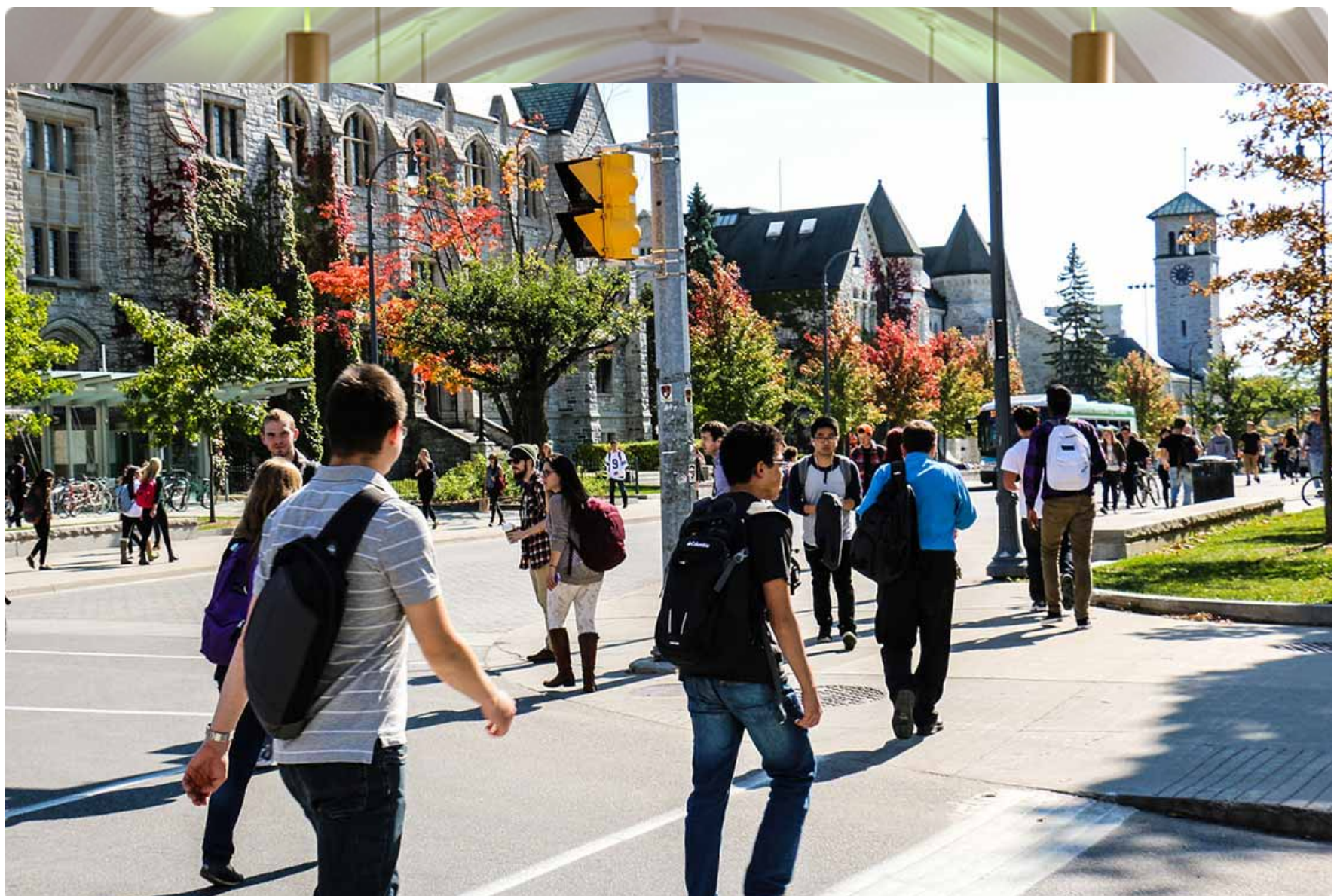
Technical support in the School of Computing is provided by the technical staff on the 5th floor of Goodwin Hall.

## School Computing Facilities

Graduate students in the School of Computing tend to make more extensive use of the School's facilities rather than the University's central computing facilities. The general research facility is a network of Sun, SGI, Apple and PC workstations. The network consists of about 100 workstations supported by file servers, and it is connected to the University network, which provides access to the Internet.

## School Email

School of Computing-specific email addresses are available by request from student or supervisor. Please email [help@cs.queensu.ca](mailto:help@cs.queensu.ca) copying your supervisor with the user name you would like and your NetID. School email addresses are managed by the technical staff in the School of Computing, while university email addresses are managed by Queen's Information Technology Services.





# School Web Server

Students have access to the school's web server and can upload a personal website to showcase their research and other information. Each student's personal website is automatically linked on the school website's "People" page at <http://www.cs.queensu.ca/people/students.php>. Student personal website URLs are of the form <http://www.cs.queensu.ca/~username/>.

Students can access their personal website directory by SSH-ing into the school's web server using any SSH software. Once logged in, you will be at your home directory: `/cis/home/username`. To upload your website, navigate to the directory `/cis/www/httpd/htdocs/home/username`.

Server: `innovate.cs.queensu.ca`

Port: 22

Username: your CS user ID (without `@cs.queensu.ca`)

Password: your CS user ID password





## Office Computers and Printing

**Office Computers.** Most graduate students who are conducting research will have a computer provided for them by the School of Computing. Funds to build and maintain these computers are provided by supervisors. Students typically have the option of using Windows or Linux.

**Printers.** The school has many printers available to faculty, staff, and students. Some computers have printers directly connected to them, while other computers are networked to a lab printer or a school printer. Most research labs have at least one printer, and office/lab computers can be configured to use that printer. If there is no printer nearby, then students can use ps1, which is a networked printer on the 7th floor of Goodwin Hall.

## Licensed Software

If you require specialized software for your research, there is a chance that you can download it for free. The university has site licenses for specialized software. The following software is available:

ArcGIS, BI Query, EndNote, Maple, MATLAB, Microsoft Office, NVivo, SAS, SPSS, Unity

To acquire a license to use this software, log in to the MyQueensU Software Centre or visit <http://www.queensu.ca/its/software/available-software>. Access to Unity is provided by the School of Computing; contact Aaron Visser for details.

## Contacts

While each member of the technical staff has specializations, in general for all questions please email [help@cs.queensu.ca](mailto:help@cs.queensu.ca) with request.

The tech staff do their best to have on-site coverage from roughly 7am - 5pm but are often available after these hours for emergencies.

In addition, the entire tech staff are always reachable over Microsoft Teams. Just search for them by name. Particular areas of expertise are outlined below:

Ben Hall	Account creation, DNS, Mail, new hardware or software requests, Solaris, Linux or Mac support
Aaron Visser	Above plus iButton enrolment and door access, advanced network needs, backup and recovery requests, VM provisioning
Zack Babcock	Desktop support, printer support, Windows support, iButton support, VM provisioning

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Doug Martin	Teaching support (CASLab), Graduate student database support, website support, VM provisioning
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Sarah-Jane Whittaker	Instructional support, website development, advanced programming topics
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## Financial Support

All thesis students (Ph.D. and research pattern M.Sc. students) accepted into the graduate program are guaranteed several sources of support from the School sufficient to cover basic fees and living expenses while enrolled at Queen's.

A range of national, provincial and Queen's scholarships are available to replace or augment basic student funding. All eligible students are encouraged to apply for both NSERC and OGS scholarships before applying to the School and during their graduate program.

On occasion, the School admits self-funded international students who can demonstrate that they have external scholarships sufficient to support them independently for the length of their graduate program.

## Sources of Support

Graduate financial support comes from a combination of several different sources that may entail different expectations.



Grants, Scholarships, Fellowships and Awards. Grants and other awards give you money but do not require you to do any work in return (other than remain in good standing in your graduate program). These are the preferred sources of graduate funding. Students without external scholarships normally receive a Queen's Graduate Award (QGA) as a part of their guaranteed financial support.

Graduate Research Fellowship. Graduate Research Fellowships (GRF) provide research support paid from the research funds belonging to your supervisor (or another faculty member) in support of your thesis or other work of interest to your supervisor's research program. This forms a portion of your guaranteed support, and is the usual source of continuing support if you require it. Expectations vary widely by faculty member, and you should discuss with your supervisor the research expectations associated with your GRF support.

Teaching Assistantships. Teaching assistantships (TA) provide payment from the School in return for your assistance in the provision of undergraduate courses, normally as a tutor, lab supervisor or marker for a course. Each TA lasts for one term, during which you are expected to spend about seven hours per week on teaching-related duties. Satisfactory performance is required. TA pay is additional to the guaranteed funding.

Employment. Other jobs, either inside or outside the university, can be used at any time to supplement your income. You can remain a full-time student as long as you are not employed more than 10 hours per week. Above this limit you must change your status to part-time. Note that residency requirements for each degree specify a minimum time that you must spend as a full-time student, and scholarships and visas may require you to remain in full-time study.

Queen's Work Study program. This program provides eligible students the opportunity to receive priority for certain part-time positions during a specified period of study. The Work Study Program is an excellent opportunity to assist students demonstrating financial need with a source of income to supplement their cost of studies. To know more about this program, check the following link.

<https://www.queensu.ca/studentawards/financial-aid/queens-financial-aid/work-study-program>

Emergency support. Emergency funding from the University may be available if you run out of all other options following the end of your guaranteed funding period. The University maintains a continuing bursary/loan fund for hardship situations.



## External Scholarships

Students are strongly encouraged to apply for external scholarships. The two principal sources are NSERC Scholarships, which are open to Canadians and landed immigrants, and Ontario Graduate Scholarships (OGS) which are available to all Ontario residents, including international visa students. Scholarships tenable by international students are available from a variety of sources. Ask the School of Computing or the School of Graduate Studies for more details.

## Funding Regulations

- A full-time graduate student is not permitted by the Province of Ontario to be employed for more than 10 hours per week outside of their studies.
- A graduate student being paid a Research Assistantship is considered to be doing work for pay, whatever private arrangements the grant- or contract-holder may have made with the student. It makes no difference that the student is only working on his/her research, or that the grant-holder considers this to be a stipend.
- The pay rate for Teaching Assistantships for 2018-2019 is \$41.37 per hour. The pay rate for GRFs is similar. Only in very exceptional circumstances would a higher rate be justified.

## Fees and Living Expenses

**Fees and Tuition.** The School of Graduate Studies provides a summary of tuition fees and other expenses at <https://www.queensu.ca/sgs/current-students/registration-fees>.

The University awards tuition bursaries to offset the higher fees paid by international visa students. As a minimum requirement to obtain such a bursary, applicants should have at least an A average (around 80%).

**Housing.** There is a wide variety of housing available in Kingston. Costs vary greatly according to the type of accommodation (a room in student house or bachelor apartments) and its location. Prices can start at 400\$ and go up to 1500\$. Some include the cost of some or all utilities (water, gas, electric) in the rent, but others do not. The cost of utilities depends on how many people you live with can range \$50 - \$200 a month. Internet is also typically an extra fee (approximately \$80). Parking is not guaranteed at rentals, and may also come at additional costs depending on your building.

In recent years, apartments have become more difficult to find and students are recommended to arrange accommodation as far as possible in advance of arriving in Kingston. There is also limited accommodation available in various University Residences. For detailed housing information, prospective applicants should contact the University

Housing Service directly. You can also check additional housing resources available on the following Queen's website <https://www.queensu.ca/studentcommunityrelations/housing-resources>.

Given the ongoing pandemic, your housing search may be limited to online viewings and remote negotiations. Most leases are signed for a fixed term. That signed contract constitutes a binding agreement that cannot be cancelled if you later determine that the living space is not suitable for you, is too far from campus, or does not meet expectations. Before you sign a lease, make sure you are confident that the space is appropriate for your needs. To receive confidential guidance on evaluating off-campus housing, check the following page <https://www.queensu.ca/studentcommunityrelations/home>

**Living Expenses.** Students should expect to spend about \$10,000-\$12,000/year on living expenses in addition to tuition and other student fees. Most or all of these costs are covered by your funding, but emergency support is available if needed.

**Food.** There are a number of different groceries stores located around campus. Prices vary between stores, and some offer student discount days. Groceries in Canada can be more expensive, so expect to spend about \$300 per month on food.

**Transportation.** In previous years, student bus passes have been included in the cost of tuition for Queen's students. Students received a sticker for the back of your student card and this would act as your pass for the year. Students also had the option to opt out of the bus pass on Solus. Given the pandemic, Queen's has stopped issuing student bus passes, so we are unsure at this time if they will be reinstated with the return to in person learning. If you need to purchase a bus pass, you can do so here: <https://www.cityofkingston.ca/residents/transit/fares/post-secondary-student-pass>. Via Rail (1800 John Counter Blvd.) and Megabus are the two most common ways to travel from Kingston to other destinations. There is a Megabus pickup located in front of Goodes Hall.

**Tax time.** In the winter term, around February/March, you'll start to hear a lot of talk about filing taxes. The deadline to file taxes in Canada is generally on the last day of April, and the most common tax forms students receive are T4s (for employment income), T4As (for scholarship/bursary income), and T2202s (for tuition payments). The Queen's University International Centre (QUIC) has written a tax guide for students: <https://quic.queensu.ca/living-in-kingston/taxes/>



## Life in Kingston

Keep these pages handy. They're full of useful information!

**The City and Politics.** The City of Kingston has a City Council that deals with municipal matters, a Member of Provincial Parliament (MPP) who deals with provincial matters, and a Member of Parliament (MP) who deals with federal matters. The Sydenham district of Kingston also has a councillor who represents citizens and handles issues in the neighbourhoods surrounding Queen's.

Bryan Paterson	Mayor of Kingston	<a href="mailto:mayor@cityofkingston.ca">mayor@cityofkingston.ca</a>
Peter Stroud	Sydenham District Councillor	<a href="mailto:pstroud@cityofkingston.ca">pstroud@cityofkingston.ca</a>
Ian Arthur	Member of Provincial Parliament (MPP)	<a href="mailto:IArthur-QP@ndp.on.ca">IArthur-QP@ndp.on.ca</a>
Mark Gerretsen	Member of Parliament (MP)	<a href="mailto:mark.gerretsen@parl.gc.ca">mark.gerretsen@parl.gc.ca</a>

**Hospitals and Health Care.** Kingston has three hospitals. Kingston General Hospital (KGH) is closest to campus, near the shore of Lake Ontario. Hotel Dieu Hospital is located downtown, and it houses the city's urgent care centre for non-emergency injuries/illnesses. Providence Care Hospital is near St. Lawrence College, and it focuses on mental health and long-term care.

The emergency room at Kingston General Hospital is open 24 hours a day. The urgent care centre at Hotel Dieu Hospital is open from 8am to 8pm year-round.

Queen's Student Wellness Services (SWS) is a clinic located on campus near KGH. This clinic is open for walk-in appointments throughout the day, though arriving early is recommended. Students can get treated for minor illnesses, receive assessments and referrals for specialty services, have health tests performed, and receive medication and birth control. Student Wellness Services also provides mental health and psychiatric services for students.

**Call 911 in case of an emergency. Do not call a hospital to report an emergency. If you are distressed, call 911 or call the 24-hour Community Crisis Line at (613) 544-4229.**

Kingston General	<b>Emergency room</b> , general care, clinics	76 Stuart Street, <b>911</b> or (613) 548-3232
Hotel Dieu	Urgent care (non-emergency), clinics	166 Brock Street, (613) 544-3400
Providence Care	Mental health and specialist care	752 King Street W, (613) 544-4900
Queen's SWS	Walk-in treatment, minor illness, testing	146 Stuart Street, (613) 533-2506

Grocery Stores and Pharmacies. There are a number of grocery stores across Kingston, with many near campus and the downtown area. Chain stores like Metro, Food Basics, or Loblaws will have the largest selection of food available. There is a grocery store on campus (Grocery Checkout) located on the main level of the Queen's Centre. A number of specialty food stores are located downtown.

Similarly, there are many pharmacies around Kingston. The largest pharmacy chain is Shopper's Drug Mart, with two locations downtown. There is a smaller pharmacy on campus, located on the main level of the Queen's Centre. Many small pharmacies are also located throughout the city. All pharmacies should be equipped to fill any prescription, and you can get services such as flu shots from most pharmacies as well.

Mail. The main Canada Post office is located at the intersection of Brock and Bagot Streets. Smaller post offices are sometimes located within pharmacies and other stores.

Physical Activity. Grad students get free year-round access to the Athletics and Recreation Centre (ARC) on campus. The ARC contains two gyms, a cardio and strength zone, a full-size pool, and specialty rooms such as dance studios and combat rooms with padded mats. However, the ARC tends to get extremely busy during the day, especially at the start of each term.

The ARC also runs a number of fitness programs and intramural sports throughout the year. For more details, see the ARC website at <http://rec.gogaelsgo.com>.

The City of Kingston has a number of recreation facilities. The Artillery Park Aquatic Centre and the INVISTA Centre have fitness equipment and pools. The INVISTA Centre and the Memorial Centre have arenas for ice sports. During the winter months, the city builds an outdoor ice rink near City Hall for casual skating.

Queen's ARC	M-Th 6am-12:30am, F 6am-10:30pm	284 Earl Street, (613) 533-2500
Artillery Park	M-F 6am-9:30pm	382 Bagot Street, (613) 546-4291
INVISTA Centre	M-Th 6am-10pm, F 6am-9pm	1350 Gardiners Road, (613) 544-4442
Memorial Centre	Open October-March. Contact for details.	303 York Street, (613) 546-3183

Recreation and Sport. Kingston has two ice hockey teams: the Kingston Frontenacs in the Ontario Hockey League, and the Kingston Voyageurs in the Ontario Junior Hockey League. The Kingston Clippers are the city's League1 Ontario soccer team. Kingston is also world-



famous for sailing, and the annual Canadian Olympic-Training Regatta is held at Portsmouth Olympic Harbour each summer.

The university's varsity team is the Queen's Gaels. The Gaels compete across a number of sports, including basketball, cross-country running, football, hockey, rowing, rugby, soccer, and volleyball. Students get free access to varsity games by showing their student card.

Restaurants. Kingston is known for having a huge variety of restaurants. Below are just a handful.

Ali Baba Kebab	Middle-Eastern meals, also sells spices/teas	320 Princess Street
Amadeus Cafe	German dishes with biergarten in back	170 Princess Street
Chez Piggy	Perfect for any meal, a Kingston staple	68R Princess Street
Harper's Burger Bar	Fresh grilled burgers and great decor	93 Princess Street
Megalos	Upscale restaurant, but not too formal	226 Princess Street
Northside Kitchen	Excellent Australia-inspired breakfast/brunch	281 Princess Street
Old Farm Fine Foods	Local grocer/caterer, close to Goodwin Hall	204 Barrie Street
Pan Chanco	Wide variety of baked goods and desserts	44 Princess Street
Peter's Place	Diner-style breakfast with simple dishes	34 Princess Street
Score Pizza	Custom personal-sized pizzas with thin crust	91 Princess Street
Sima Sushi	Small sushi restaurant, great for a quick meal	66 Princess Street
Union	Bright breakfast/brunch spot	184 Princess Street
Wok-In	Takeout-only Chinese/Cambodian food	30 Montreal Street
Wooden Heads	Gourmet, wood-fired oven pizza	192 Ontario Street

Coffee. In need of a morning pick-me-up? Stop by one of these cafes.

Common Ground	Student-run coffee shop on campus, great bagels	284 Earl Street (Queen's Centre)
Crave Coffee House	Great study/work spot, lots of space	166 Princess Street
The Elm Cafe	Small cafe with local coffee and baked goods	303 Montreal Street
Sipps Cafe	Features a good selection of desserts	33 Brock Street
The Tea Room	Right beside Goodwin Hall, run by students	45 Union Street W (Beamish-Munro Hall)

Bars and Pubs. If you're in the mood for a drink, try one of the following spots.

The Iron Duke	English-style pub with great beer list and food	207 Wellington Street E
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Kingston Brewing Co.	Brewpub with great local beer and barbecue	34 Clarence Street
The Mansion	Great for live music shows and sports events	506 Princess Street
Stone City Ales	Downtown brewery with bottle/gift shop	275 Princess Street
Tir Nan Og	Irish pub, popular with undergrads	200 Ontario Street



