The unique group of scientists and faculty involved with Life Sciences at Queen's share a common goal: to lessen the impact of disease and trauma by training the next generation of health care scientists and professionals. One of the largest Bachelor of Science degree programs at Queen's, Life Sciences is in high demand by students who wish to pursue careers in biomedical research and health care.

**REASONS** to study **LIFE SCIENCES**

1. Preparation for a career in health care or biomedical research.
2. Cutting-edge research in drug development and human toxicology, cancer biology, genetics, reproduction, microbiology, experimental medicine, and neuroscience.
3. Our internship program (QUIP) offers a range of careers to explore and companies to learn from.
4. Summer research (SWEP) assistant positions with professors.
5. Home to the Cancer Research Institute, the Centre for Neuroscience Studies, and the Cardiac, Circulation, and Respiratory Group.

**ALUMNI JOBS**

- 5% of alumni work in **GOVERNMENT**
- 9% of alumni work in **PHARMACEUTICALS**
- 27% of alumni work in **EDUCATION & RESEARCH**
- 33% of alumni work in **HEALTH CARE**

**alumni STORY**

“Life Sciences opened my eyes to the opportunities and careers available in the science field. The hands-on labs gave me practical experience that was extremely valuable for my subsequent studies.”

-Jan Slipka, BScH ’14

**2018-19 thresholds**

- 3.2 cGPA AUTOMATIC ACCEPTANCE min pass in CHEM 112
- 2.0 cGPA PENDING LIST min pass in CHEM 112

*Thresholds are made on a competitive basis and are updated annually. For the latest information please visit: QUartscl.com
**LIFE SCIENCES SPECIALIZATION MAP**

### 1ST YEAR

**GET THE COURSES YOU NEED**
- In first year you will have the chance to explore the foundations of Life Sciences in biology, chemistry, geography and geology along with some electives.
- See the back page for specific courses to consider.
- Attend Majors Night in the Winter term to learn more about Plan options.

### 2ND YEAR

**GET RELEVANT EXPERIENCE**
- Join teams or clubs on campus such as the Synthetic Biology Organization, Queen's First Aid or Universities Allied for Essential Medicine.
- See the AMS Clubs Directory or the Queen's Get Involved page for more ideas.

**GET CONNECTED WITH THE COMMUNITY**
- Volunteer on or off-campus with different community organizations, such as Let's Talk Science (LTS), Queen's Union on Tropical Access to Health, or local charities.
- See the back page for specific courses to consider.
- Attend Majors Night in the Winter term to learn more about Plan options.

**GET THINKING GLOBALLY**
- Prepare for work or studies in a multi-cultural environment by taking QUC's Intercultural Competency Certificate, and research possible immigration regulations.
- Speak to a QUC advisor to get involved in their programs, events, and training opportunities.

**GET READY FOR LIFE AFTER GRADUATION**
- Grappling with program decisions? Go to Majors Night or get some help wondering about career options from Career Services.
- Attend Information Sessions in November and January offered by the Associate Dean, Life Sciences and Biochemistry.

### 3RD YEAR

**3RD YEAR**

**GET THE COURSES YOU NEED**
- Start going deeper into the discipline of Life Sciences, while considering a certificate such as Employment Relations. Attend Degree + in the Fall term to learn more about Certificates and Internship options.
- Want to make sure your academics are where you want them to be? Visit SASS (Student Academic Support Services) and the Writing Centre for some help.

**GET RELEVANT EXPERIENCE**
- Look into summer jobs by talking to the dept. or Career Services about work through SWEP or NSERC.
- Take more responsibility within different clubs or extracurriculars. Consider volunteering at Student Wellness Services or other health centres.
- Consider getting involved with the Departmental Student Council (DSC).
- Start or continue volunteering with organizations such as the Canadian Undergraduate Conference on Healthcare (CUCOH).

**GET CONNECTED WITH THE COMMUNITY**
- Consider applying to do a 12-16 month QUIP internship between your third and fourth year.
- Consider entrepreneurial opportunities via programs like the Queen's Innovation Connector Summer Initiative (QICSI) and the Summer Company Program.
- Do targeted networking with alumni working in careers of interest by joining the LinkedIn group Queen's Connects. Check out Career Services networking workshops.
- Connect with professors at events or workshops hosted by the DSC.

**GET THINKING GLOBALLY**
- Is an exchange in your future? Start thinking about where you would like to study abroad. Apply in January for a 3rd year exchange through the International Programs Office.
- Build your intercultural competence by getting involved with other cultures or by practicing or improving your language skills.

**GET READY FOR LIFE AFTER GRADUATION**
- Explore different careers of interest by reading books in the Career Services Career Advising and Resource Area, such as Academia to Biotechnology. For more information, connect with alumni on LinkedIn.
- Attend Canadians Studying Medicine Abroad offered by the Associate Dean, Life Sciences and Biochemistry.
- Attend Canadians Studying Medicine Abroad offered by the Associate Dean, Life Sciences and Biochemistry.

### 4TH OR FINAL YEAR

**WHAT WILL I LEARN?**

A degree in Life Sciences can equip you with valuable and versatile skills, such as:

- Knowledge of the cellular structures, organic systems, organic chemistry, and the functions of the human body
- Understanding of statistical research methods, the scientific method and experimental design
- Research skills leading to an ability to draw relevant information out of a large amount of data
- Fieldwork skills to design and carry out site investigations to solve problems
- Experience working in a laboratory setting and operating equipment
- Attention to detail to analyze and interpret scientific data
- Problem solving to adopt a systematic approach to problems
- Oral and written communication for procedure laboratory reports and present a report to a group
- Time and resource management

**WHERE CAN I GO?**

A degree in Life Sciences can take your career in many directions. Many students choose to continue their academic inquiry with a Master’s. Our students are equipped with a strong foundation for careers in:

- Animal research
- Drug development
- Epidemiology
- Food science and technology
- Genetics
- Medical and clinical research
- Neuroscience
- Optometry
- Public health
- Toxicology

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

1ST YEAR
- BIOL 102/3.0
- BIOL 103/3.0
- CHEM 112/6.0
- 6.0 units from PHYS 104/6.0, PHYS 106/6.0, PHYS 117/6.0
- 6.0 units from MATH 120/6.0, MATH 121/6.0, (MATH 123/3.0 and MATH 124/3.0)
- 6.0 units of electives

2ND YEAR
- BCHM 281/3.0
- MICR 221/3.0
- CHEM 281/3.0
- CHEM 282/3.0
- PHGY 215/3.0
- PHGY 216/3.0
- ANAT 215/3.0
- ANAT 216/3.0
- STAT 263/3.0 or BIOL 243/3.0
- 3.0 units of electives

3RD YEAR
- BCHM 310/9.0 or (BCHM 315/3.0 and BCHM 316/3.0)
- PHAR 340/3.0
- 3.0 units from MICR at the 300 or 400 level
- 9.0 units from LISC Options
- 6.0 units of electives

4TH YEAR
- PHAR 450/3.0
- 18.0 units in Sub-Plan (Biomedical Discovery, Biomedical Sciences, Cancer Research, Cardiorespiratory Science, Drug Development and Human Toxicology, and Neuroscience)
- 9.0 units of electives

* Please note if you were admitted to the Plan prior to May 2018 your requirements are slightly different.

Note that degree requirements are revised regularly. The most current requirements, including course lists and options, are found in the Academic Calendar at: QUartsci.com/academic-calendar