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.

### TOP 5 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: [QUartsci.com](https://quartsci.com)*
LIFE SCIENCES
SPECIALIZATION
BACHELOR OF SCIENCE (HONOURS)

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.

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.

GET THINKING GLOBALY
Prepare for work or studies in a multi-cultural environment by taking QUIC’s Intercultural Competency Certificate, and research possible immigration regulations.
Speak to a QUIC 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.

2ND YEAR

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.

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.

3RD YEAR

A chance to start grouping courses in areas of interest, or to keep it more general and explore many areas of Life Sciences. Meet with an Academic Advisor to make sure you are on track and have planned out your courses for next year — for some ideas, see the back page.
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 Career Services networking workshops.
Connect with professors at events or workshops hosted by the DSC.

4TH OR FINAL YEAR

Investigate requirements for full-time jobs or other opportunities related to careers of interest.
Assess what experience you’re lacking and fill in gaps with volunteering, clubs, or internships – check out the Career Services skills workshop for help.
Consider joining professional associations like the Analytical, Life Science & Diagnostics Association.
Join groups on LinkedIn reflecting specific careers or topics of interest in Life Sciences.

Consider a 12-16 month QUIP Internship
International students interested in staying in Canada can speak with an International Student Advisor.

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 journey 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.

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What other career paths can I pursue with a degree in Life Sciences?
- Toxicology
- Public health
- Optometry
- Neuroscience
- Medical and clinical research
- Food science and technology
- Genetics
- Epidemiology
- Drug development
- Animal research
- Academic research

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What skills will I develop in Life Sciences?
- Critical thinking
- Problem-solving
- Quantitative analysis
- Qualitative analysis
- Communication skills
- Teamwork
- Leadership
- Research skills
- Data analysis
- Technology skills
- Writing
- Reading
- Speaking

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Why choose Life Sciences?
Life Sciences is a broad field that offers a wide range of career opportunities. It provides a strong foundation for careers in medicine, biotechnology, environmental science, and many other fields. Life Sciences is also a great option for students who are interested in pursuing a career in research or academia.
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

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

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