Life Sciences  www.science.mcmaster.ca/lifesciences/

An interdisciplinary approach to the study of life provides a wholistic perspective on human health and well-being. This includes understanding the chemical interactions within cells and how these cells interact with each other to form tissues and organ systems. By investigating the neural and autonomous regulation of our bodily processes, and by integrating our studies with elements of human behaviour that influence these processes, we are better able to appreciate the pathophysiological consequences of disease. With the use of model organisms and advanced scientific techniques, we are then able to best evaluate the critical pathogenic trends that emerge during our interactions with the environment. The Life Sciences program guides students through the interdisciplinary study of the processes underlying human health and disease.

POSSIBLE CAREERS
Life Science Program graduates have attained exciting careers in the following areas:

- Healthcare
  - Dentistry, occupational therapy, physiotherapy, chiropractic medicine, nursing, medicine, pharmacy, genetic counseling
- Research
  - Environmental, biological, genetic, microbiology, medical drug development
- Science Communication
  - Science education and research in education, teaching, scientific writing, journalism
- Industry
  - Pharmaceutical, consulting, data management
- Government
  - Law, public policy, global health, media relations, ethics

FOCUS OF STUDY
The Honours Life Sciences degree is an interdisciplinary program that builds on core courses from the Level I Life Sciences Gateway.

The Life Sciences Program is designed to empower students with major skills, which will carry them through to careers in the field of Science and beyond. Life Science courses provide students with opportunities to engage in scientific communication, transfer of knowledge, laboratory work and experiential project, placement and thesis opportunities. The Living Systems Laboratory is a venue of discovery, with students engaging in experiments that highlight organismal functions with particular focus on human health and aging. In addition to the core Honours Life Sciences and Co-Op Programs, the Sensory Processes and Origins of Disease Specializations provide students with further opportunities to understand how organisms are influenced by interactions with each other and the environment.

EXPERIENTIAL PLACEMENTS, RESEARCH PROJECTS, THESIS OPPORTUNITIES AND CO-OP
All students in the Life Sciences Program have an opportunity to pursue experiential placements at McMaster or within the broader community. Through these placements, students are able to shadow professionals in the workplace, and even contribute their acquired skills towards end goals at their respective placements. Students in the program are also able to pursue further scientific research training in the form of research projects or a 4th year thesis within the laboratory of a McMaster Researcher. Within the laboratory, students are able to strengthen the skills they have acquired throughout their undergraduate program and further gain insight into possible careers they may wish to pursue.

The Life Sciences Program offers a cooperative education option, beginning at Level III, for students wishing to integrate paid and relevant work experience with their academic program. Through the Co-Op Program, students are able to connect their learning in the classroom within practical real-world situations. Cooperative education extends the undergraduate program to five years, and is a great way to gain practical experience, while also developing a professional network beyond McMaster. During the four, 4-month work terms, students are able to enhance their technical and nontechnical workplace skills such as teamwork, time management, and effective communication strategies. Admission is based on academic achievement and an interview.

Students in the Life Sciences Co-Op program have previously worked in government agencies, academic university environments, hospitals and industrial settings. For further information, consult the Undergraduate Calendar or stop by the Science Career and Cooperative Education (SCCE) office in BSB 127.
LEVEL II PROGRAMS

Honours Life Sciences (Honours B. Sc.)

- Origins of Disease Specialization (Honours B. Sc.)
- Sensory Motor Systems Specialization (Honours B. Sc.)
- Life Sciences (B. Sc.)

ADMISSION REQUIREMENTS

- Completion of any Level I Program with a Grade Point Average of at least 5.0 including:
  - 3 units BIOLOGY 1A03
  - 3 units CHEM 1A03
  - 3 units from MATH 1A03, 1LS3
  - 3 units from PHYSICS 1A03, 1C03
  - 3 units from BIOLOGY 1M03, ENVIRSC 1C03, 1G03, PSYCH 1XX3
  - 9 units from the Science I Course List

- Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement, but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:
  - 3 units BIOLOGY 1A03
  - 3 units CHEM 1A03
  - 3 units from MATH 1A03, 1LS3
  - 3 units from PHYSICS 1A03, 1C03
  - 3 units from BIOLOGY 1M03, ENVIRSC 1C03, 1G03, PSYCH 1XX3
  - 9 units from the Science I Course List

- Admission Notes: Completion of PSYCH 1XX3, BIOLOGY 1M03 and CHEM 1AA3 is strongly recommended as they serve as prerequisites for required courses in levels II & III.

LIFE SCIENCE SOCIETY EVENTS

- FALL
  - Registration for Life Science Mentorship Program (Mentee/Mentor)
  - Life Science Society “Bondfire”
  - Application for Life Science Society First Year Rep

- WINTER
  - McMaster Interdisciplinary Research Expo (MIREx)
  - Life Science Formal
  - Life Science Society Executive Position Hiring

For more information:
http://www.maclifesciencesociety.com

CONTACT INFORMATION

www.science.mcmaster.ca/lifesciences
General inquiries: Hannah Abram or Rebecca Misiak | lsp@mcmaster.ca
Experiential, project and thesis inquiries: Dr. Sunita Nadella | sisip@mcmaster.ca
GSB, Room 105

SCIENCE I COURSE LIST:
ASTRON 1F03, BIOLOGY 1A03, 1M03, BIOPHYS 1S03, CHEM 1A03, 1AA3, ENVIRSC 1C03, 1G03, GEOG 1HA3, 1H83, MATH 1A03, 1AA3, 1B03, 1LS3, 1LT3, 1MP3, MEDPHYS 1E03, PHYSICS 1A03, 1AA3, 1C03, 1CC3, PSYCH 1F03, 1X03, 1XX3, SCIENCE 1A03