

GRADUATE PROGRAMS IN

Earth & Space Science





Discover Earth & Space Science at Lassonde.

Earth and Space Science was one of the founding graduate programs at York University and the Centre for Research in Earth and Space Science (CRESS) is recognized internationally for, amongst other accomplishments, the development of satellites and scientific instruments for space exploration and scientific analysis. Our faculty members and graduate students conduct collaborative, interdisciplinary research within and beyond York from our advanced laboratory facilities.

Fast Facts:

481

Graduate Students at Lassonde

90

Graduate Students in Earth & Space Science

22

Earth & Space Science Faculty Members

Program Information

MSc in Earth & Space Science

Length:
Full-time: 2 years Part-time: 4 years

- Components:**
- Coursework & Thesis
 - Coursework & Research Exercise

- Admissions Requirements:**
- Completion of a 4-year bachelor’s degree in chemistry, physics, pure or applied mathematics, astronomy, engineering or engineering physics from a recognized university.
 - Minimum GPA of (B) standing.

PhD in Earth & Space Science

Length:
Full-time: 4 years Part-time: 6 years

- Components:**
- Coursework & Dissertation
- Admissions Requirements:**
- Completion of a master’s degree in chemistry, physics, pure or applied mathematics, astronomy, engineering, or engineering physics from a recognized university. Applicants may be admitted as candidates (PhD I) in a program leading to the PhD degree.
 - Minimum GPA of (B) standing.

Graduates with an honours degree in chemistry, physics, pure or applied mathematics, astronomy, engineering, or engineering physics may be considered for admission to the program leading to the PhD degree. However, such graduates must first register as candidates for the MSc degree.



From creative to Creator, combining performance arts with earth & space science

Chimira Andres, a PhD student in Lassonde’s Earth and Space Science program, has a diverse educational background, having worked with organizations like the European, Canadian, and Italian Space Agencies, as well as NASA. In this episode, she shares her educational journey, discusses the intersections of her two passions - professional dance and space, and offers advice on work-life balance.

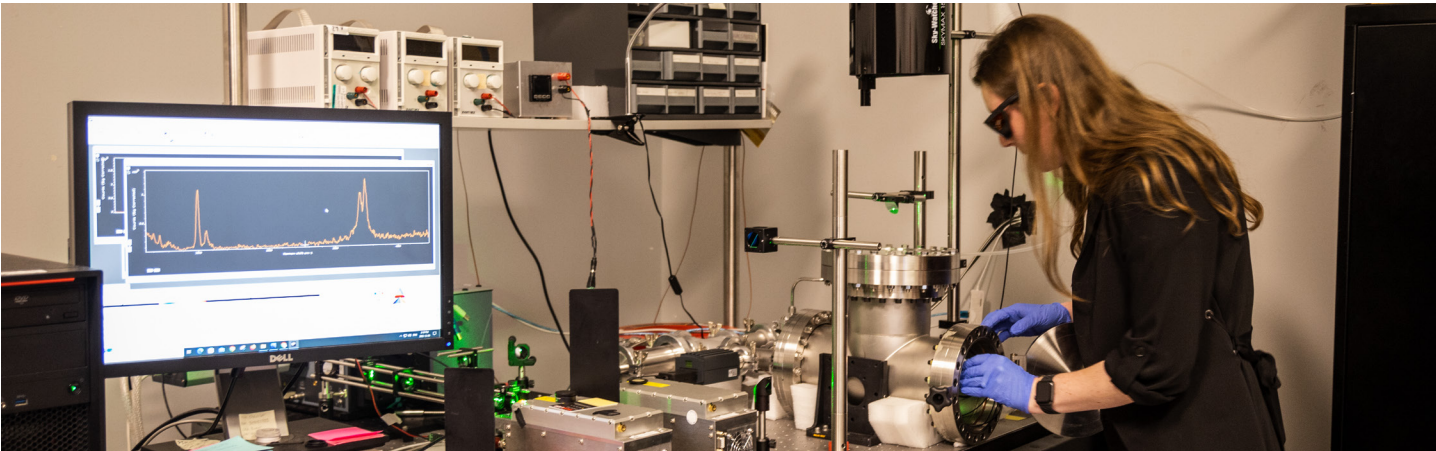
Listen now:



Research Areas/Strengths

The graduate program in Earth and Space Science (ESS) in combination with the Centre for Research in Earth and Space Science (CRESS) and the Department of Earth and Space Science and Engineering (ESSE) conduct groundbreaking research in the areas of:

- Atmospheric Science and Meteorology
- Geomatics Science and Geomatics Engineering
- Space Science and Space Engineering



From space waste to finding your place with Professor Franz Newland

In this episode, we speak with Franz Newland, an associate professor in Lassonde’s Earth and Space Science and Engineering department. Professor Newland shares his journey and passion for space sciences, drawing from his international experience at institutions such as the European Space Agency. He also discusses his research on satellite technologies and involvement in York University’s CubeSat team.



Listen now:



Organized Research Units

At York University, Organized Research Units (ORUs) have a strong history of collaborative, innovative and interdisciplinary research. Lassonde’s ORUs provide a home for research development beyond traditional academic units. ORUs serve as synergistic hubs for participatory research programs that bring together expertise from across disciplines.

- Centre for Research in Earth and Space Science
 - Centre for Innovation in Computing @ Lassonde
 - The Mobility Innovation Centre
- Manufacturing, Technology, and Entrepreneurship Centre
 - Centre for Artificial Intelligence & Society
 - York Centre for Vision Research
 - One WATER

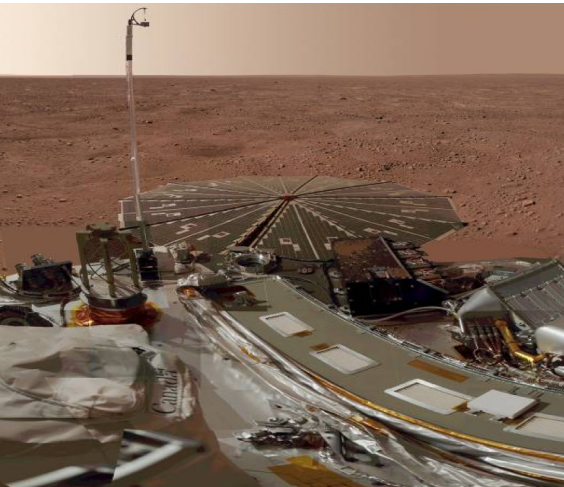
Learn more:



Discover CRESS

The Centre for Research in Earth and Space Science (CRESS) facilitates research activity within the areas of planetary exploration, climate and environment and space technology.

CRESS researchers are at the forefront of planetary exploration in Canada. CRESS is bridging the gap between science and engineering with a focus on the development, use and interpretation of data from in-situ instrumentation. CRESS researchers have led Canadian contributions to the NASA Mars Phoenix mission and the NASA OSIRIS-REx mission. CRESS researchers are also involved in the NASA Mars Curiosity rover mission.



Learn more:



Graduate Funding

The Lassonde School of Engineering provides a competitive, guaranteed funding package to help meet the financial needs of our graduate students in order to promote excellence in research and teaching. Last year our graduate students took home **\$17,000 to \$18,000** after paying tuition*. Additional funding is also available through scholarships and awards.

In addition to our already impressive funding packages, the Lassonde School of Engineering offers top-ranked applicants the York Graduate Scholarship in recognition of academic excellence. The York Graduate Scholarship is awarded in Year 1 and is non-renewable. No special application is necessary for this scholarship and all eligible applicants are automatically considered.

*Amounts are subject to change in future years.



Life on MARS: York U Team heads north to look for clues to Martian mystery

A York University team embarks on an extraordinary Arctic journey to unlock Mars’ mysteries. By studying Arctic environments as Martian analogs, they aim to understand potential habitability on Mars. This innovative initiative involves testing cutting-edge technology, collecting data on microbial life, and exploring how life adapts to extreme surroundings. The outcomes hold the potential not only to enhance our comprehension of Mars but also to illuminate the possibilities of extraterrestrial life. This exploration aligns with the broader mission of space research, expanding our understanding of both distant planets and the origins of life itself.

Read more:



Alumni Spotlight



Brittney Cooper

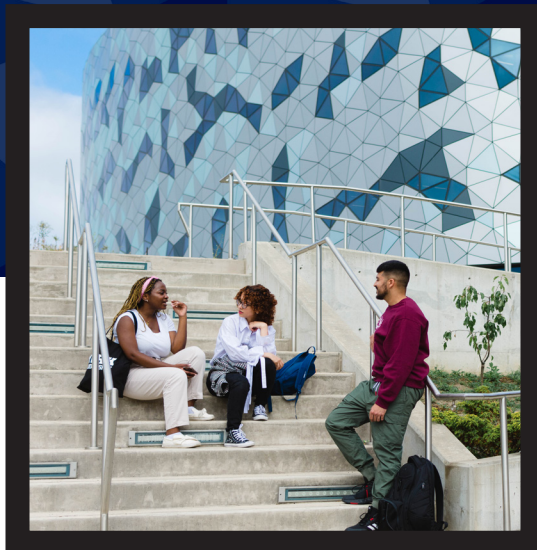
MSc Earth and Space Science

“The Lassonde School of Engineering and the Earth and Space Science and Engineering department were very encouraging and supportive of all students gaining a range of hands-on research experience.

They offered amazing opportunities every year to take part in funded research for students like me to expand their skill set and learn how to effectively communicate.

In my case, I loved what I was working on so much that I continued on to graduate studies and worked in the same lab for over 5 years!”





Connect with us!

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