

## **SPECIALIST PROGRAM IN PHYSICS AND ASTROPHYSICS (13.5 credits)**

Specialist program in physics and astrophysics program prepares students for careers in industry, government, teaching and graduate studies.

It offers rigorous and in-depth training in the core areas of physics and astrophysics, making use of a strong Mathematical foundation. You will learn the principles of classical and modern physics, the foundation of astrophysics, gain computation skills and gain research experience before graduation.



## **SPECIALIST PROGRAM IN ENVIRONMENTAL PHYSICS (16 credits)**

This program offers a wide introduction to environmental science based on a foundation grounded in a classical physics education. You will focus on the principles of mechanics, electricity and magnetism and thermodynamics while incorporating exposure to current problems in Earth and Atmospheric Science in their broader scientific understanding.

Fields explored include hydrological processes, geophysics, natural hazards, climate change and remote sensing.

## **MAJOR PROGRAM IN PHYSICS AND ASTROPHYSICS (8.5 credits)**

Major in physics and astrophysics program offers a solid physics and astrophysics background with the opportunity to explore other disciplines. It gives students the flexibility in upper year physics requirements, where they can plan their own upper division courses to fit their individual objectives. Students are advised to consult an advisor when planning, and to have their program approved.

## **MINOR PROGRAM IN ASTRONOMY AND ASTROPHYSICS (5 credits)**

Minor in Astronomy and Astrophysics program is intended for students who want to acquire basic knowledge in Astronomy and Astrophysics and combine it with work in other subjects. This program requires less coursework than the specialist or major program, but still require some upper year courses.



### *Physical sciences Programs*

#### **MAJOR IN PROGRAM IN PHYSICAL SCIENCE (8 credits)**

The Major Program in Physical Sciences provides a general background in the physical sciences with emphasis in the area of astronomy, physics and physical chemistry. It is intended for students who want to combine physical skills with work in other subjects, and those who do not intend to pursue graduate studies

#### **SPECIALIST PROGRAM IN PHYSICAL AND MATHEMATICAL SCIENCES (15.5credits)**

Specialist Program in Physical and Mathematical Sciences provides a framework of courses in the Physical Sciences based upon a firm Mathematical foundation, relating Astronomy, Chemistry, Computer Science, Physics and Statistics. It prepares students for careers in teaching, industry, and government as well as for further studies at the graduate level.





# Our physics and astrophysics programs:

Physics and Astrophysics Specialist  
Environmental Physics Specialist  
*(coop option available)*

Physical and Mathematical Sciences Specialist

Physics And Astrophysics Major  
Physical Sciences Major  
Physics And Astrophysics Major

Want a job straight out of school? Here is just a few of jobs our physics and astrophysics graduates have:

Nuclear physicist ♦ Astronomer ♦ Material Scientist ♦ Meteorologist ♦ Geophysicist ♦ Optical and Laser Engineer ♦ Energy Policy Analyst ♦ Industrial (automotive, space, healthcare, energy, materials, technology, IT) research scientist ♦ Research scientist in astronomy, physics, planetary sciences, geophysics etc. ♦ Data Analyst for financial, medical and other industries ♦ etc, etc...

Want to continue further study? Here is just a few options for our graduates:

- ♦ Combined programs (with Master of Engineering, Master of Environmental Science and Master of Teaching)
  - ♦ Professional schools (technology, law, engineering...)
  - ♦ Graduate school (masters, PhD, technology, education...)



DEPARTMENT OF PHYSICAL & ENVIRONMENTAL SCIENCES



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## Stay in touch!

<https://uoft.me/PHY>

## Visit us!

Department of Physical and Environmental Sciences  
University of Toronto Scarborough  
1065 Military Trail Toronto  
Ontario Canada M1C 1A4

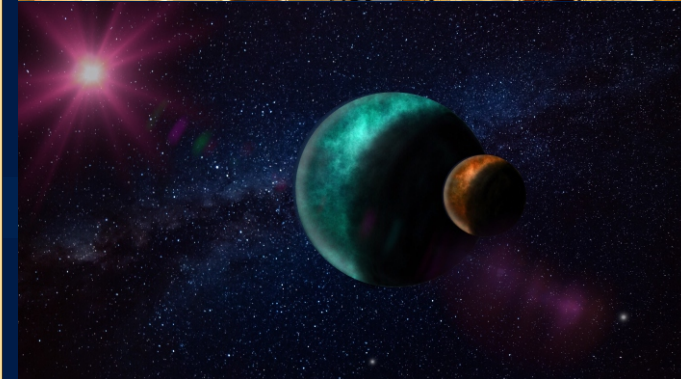
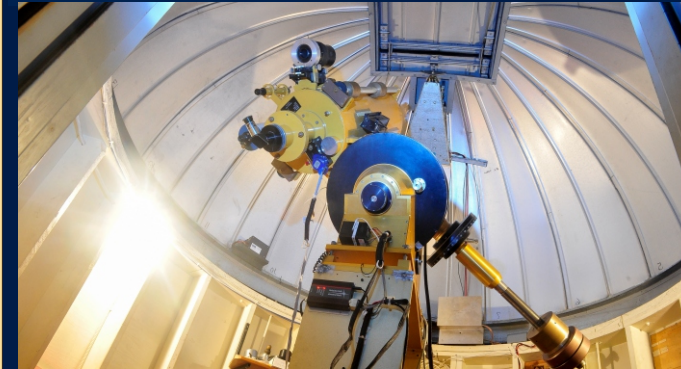


## Did you know?

Thanks to Physics & Astrophysics, UTSC campus is a home of a model solar system installation that includes ten planet markers at the exact location of each planet on July 1, 1867, the day of Canada's confederation. Markers include planet description and its position in the solar system. Each 1 mm of the model represents 10,000 km. Final marker is installed at the Eureka Research Station, Nunavut. The model spans 4,000 kilometres, and is one of the largest in the world.  
(watch the video <https://youtu.be/FVE0gXe9wUs>)



Physical & Environmental Sciences  
**UNIVERSITY OF TORONTO**  
SCARBOROUGH



# Physics & Astrophysics

