

Physics & Astrophysics (HBSc)

Specialist

Major

Minor

Department of Physical & Environmental Sciences

Physics is among the oldest scientific disciplines. It seeks to understand the interactions and evolution of all objects in the universe. This 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. We specialize in computational, environmental, and planetary physics.

Complementary Programs: Major program in Computer Science, Major program in Mathematics

Make the most of your time at UTSC!

We want to help you maximize your university experience, so we've pulled together information and suggestions to get you started, although there are many more! As you review the chart on the inside pages, note that many of the suggestions need not be restricted to the year they are listed. In fact, activities such as joining a student club, engaging with faculty and seeking opportunities to gain experience should occur in each year of your study.

Check out future career opportunities and skills acquired from completing this program:

Competencies & Skills

- Apply physical principles to problems and formulate solutions
- Integrate theoretical approaches
- Mathematical and computational modelling
- Design and execute experiments
- Critical thinking

Careers for Graduates

- Researcher in Academia or Industry
- Financial Industry
- Data Science
- Education
- Policy and Data Analyst in Government

Further Education

- Graduate Studies
- Teacher Education
- Software Development
- Finance
- Engineering
- Nuclear Medicine



Connect with Alumni at events on **CLNx** and through **Partners in Leadership**, **10,000 Coffees**, **LinkedIn** and more!

For more information go to:
uoft.me/alumni-services

**NEED HELP CHOOSING
YOUR PROGRAM?**

See uoft.me/choosing

Physics & Astrophysics (HBSc) Major Program Pathway

HOW TO USE THIS PROGRAM PATHWAY

Read through each year; investigate what appeals to you here and in other Program Pathways that apply to you. Note that this Pathway is only a suggestion. **For the most up to date information, please check the UTSC Calendar.**

YEAR 1 (0 - 3.5 Credits)

YEAR 2 (4 - 8.5 Credits)

YEAR 3 (9 - 13.5 Credits)

YEAR 4 or FINAL YEAR (14 - 20 Credits)

CHOOSE YOUR COURSES WISELY

- 2.5 credits as follows: PHYA10H3, PHYA21H3, MATA30H3, MATA23H3, [MATA36H3 or MATA37H3].
- Explore different kinds of courses; this will also help with fulfilling breadth requirements and electives.
- Use Degree Explorer and the UTSC Calendar to plan your courses and program.

- 2.5 credits as follows: ASTB23H3, MATB41H3, MATB42H3, MATB44H3, PHYB10H3.
- 1.5 credits from: PHYB56H3, PHYB21H3, PHYB52H3, PHYB54H3.
- Use Degree Explorer and meet with your Program Advisor to ensure you are on track with your degree.

- 2.0 credits from (taken in Year 3 to 4): ASTC25H3, MATC34H3, MATC46H3, PHYC50H3, PHYC56H3, PHYC11H3, PHYC54H3, PHYD26H3, PHYD37H3, PHYD38H3, PSCB57H3, PSCD02H3, PSCD50H3, PHYD01H3, PHYD72H3.
- Use Degree Explorer to ensure you are on track with your degree.

- Consider an independent research project with a faculty member (PHYD01 or PHYD72).
- Ensure you have fulfilled your breadth requirements.
- Use Degree Explorer to ensure you are on track to graduate.
- Register your “Intent to Graduate” on ACORN by the deadline.

DEVELOP YOUR ACADEMIC & RESEARCH SKILLS

- Attend Facilitated Study Groups.
- Use the Physics Aid Centre for support and to develop your problem solving skills.
- Writing support is available at the Centre for Teaching & Learning (CTL) Writing Centre.
- Schedule an appointment with your Program Librarian for research assistance.

- Check the Research Catalogue and jobs on CLNx for possible research opportunities.
- Drop by the Math & Statistics Learning Centre to have your course-related questions answered.

- Take an elective course to expand your academic horizons and skills.
- Contact professors about summer research opportunities.
- Attend the department’s iSPEAC seminar series where invited guests share their cutting-edge research.

- Consider taking a research course (PHYD01 & PHYD72).
- Enter to win the UTSC Library Undergraduate Research Prize or Poster Forum.
- Attend the iSPEAC seminar series.

APPLY THEORY TO PRACTICE

- Attend the UTSC Faculty Mix & Mingle Fair to connect with professors and learn more about their specialties.
- Start building your Co-Curricular Record (CCR) and search for Experiential Learning opportunities.

- Check out Global Research Abroad opportunities through the International Student Centre (ISC) to gain valuable international and research experiences.

- Build on your skills and knowledge through relevant events offered through your department, student groups, DSL and the AA&CC.

- Attend the Summer & Full-time Job Fair in January to meet with potential employers looking to hire students for summer and full-time positions relevant to your field.

BECOME AN ENGAGED CITIZEN (LOCALLY & GLOBALLY)

- Join the Environmental and Physical Sciences Students’ Association (EPSA) and get involved in their activities.
- Volunteer in DSL’s Alternative Reading Week program to gain experience and knowledge about social change and community development.

- Look into ISC’s Global Learning opportunities, such as the Summer Abroad, Explore, or Student Exchange Programs.
- Consider volunteering for science events, such as the Scarborough Science Fair and Science Literacy Week.

- Consider running for an elected position in EPSA or another campus club.
- Become a tutor at the Physics Aid Centre.

- Participate in the AA&CC’s Partners in Leadership program to learn and network with an alumni mentor about transitioning into the work field or further education.

PLAN FOR YOUR FUTURE CAREER

- Volunteer with organizations to explore your interests; check listings on CLNx.
- Attend the UTSC Get Experience Fair in September and register with SCSU’s Volunteer Network Program to explore opportunities.

- Gain experience by applying for a summer, part-time or Work Study position via CLNx.
- Considering grad school? Speak to professors and advisors early so you are on track.
- Explore careers through the AA&CC’s Job Shadowing and In The Field programs.

- Plan a career path with a staff member at the AA&CC.
- Check CLNx for networking events and employer information sessions to attend.
- Attend the Graduate & Professional School Fair in September.

- Attend the AA&CC’s Get Hired job search conference in April/May.
- Attend a Jobs for Grads orientation for a job search “crash course” and for access to full-time job listings.
- Discuss grad school plans early with staff at the AA&CC and your professors; get your Personal Statement reviewed in the AA&CC.

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Department of Physical & Environmental Sciences

SERVICES AT UTSC THAT SUPPORT YOU:

To learn about resources and departments that can support you, download the UTSC Student Experience app or visit uoft.me/StARTNow

Diversity & Inclusion

The University of Toronto Scarborough commits to intentionally foster a welcoming and supportive environment for students, faculty, and staff where diversity is valued, and every member of the community feels a sense of belonging on campus.

utsc.utoronto.ca/edo/

Academic Integrity

The university community supports an environment of academic integrity; these are values that include honesty, trust, fairness, respect and responsibility. Learn about the university's academic rules and how to avoid accidental plagiarism by attending an Academic Integrity Matters (AIM) workshop.

academicintegrity.utoronto.ca/

Healthy Campus

UTSC provides supportive environments, resources and services to empower students to maintain their overall physical and mental health and foster their academic success.

uoft.me/healthycampus/

Co-Curricular Record

The co-curricular record is an official institutional document that recognizes your involvement outside the classroom as a significant part of your U of T experience.

clnx.utoronto.ca/ccr

FUTURE STUDENTS

For admission requirements to UTSC, check out the U of T Scarborough Viewbook or contact:

Admissions & Student Recruitment

University of Toronto Scarborough
Room HL104, Main Floor, Highland Hall
416-287-7529

admissions@utsc.utoronto.ca

CURRENT STUDENTS

Departmental Contact

Prof. Johann Bayer, j.bayer@utoronto.ca

Physics & Astrophysics Librarian

Sarah Forbes, s.forbes@utoronto.ca,
416-287-5616

Academic Advising & Career Centre

Room AC213 | 416-287-7561

Department of Student Life

Room SL157 | 416-208-4760

Environmental & Physical Sciences Students' Association (EPSA)

<https://www.mye psa.ca/>

DID YOU KNOW...

We recently renovated our upper physics laboratory course with new rooms and experiments.



Glossary of acronyms:

AA&CC - Academic Advising & Career Centre
CLNx - Career & Co-Curricular Learning Network
CCR - Co-Curricular Record
CTL - Centre for Teaching and Learning
DSL - Department of Student Life
EPSA - Environmental and Physical Sciences
Students' Association
iSPEAC - invited Speakers in Physics, Environmental science, And Chemistry
ISC - International Student Centre
SCSU - Scarborough Campus Students' Union

DISCLAIMER: Please refer to the calendar for the most current and accurate information on programs and degrees: utsc.calendar.utoronto.ca