

**University of Toronto**  
**AEROSPACE PROGRAMME**  
*Job Posting - Course Instructor Position*  
**Fall Term 2023 (September – December)**

Posted on June 30, 2023

The Aerospace Programme seeks 1 Course Instructor for the following course:

**ROB310H1F – Mathematics for Robotics**

*The course addresses advanced mathematical concepts particularly relevant for robotics. The mathematical tools covered in this course are fundamental for understanding, analyzing, and designing robotics algorithms that solve tasks such as robot path planning, robot vision, robot control and robot learning. Topics include complex analysis, optimization techniques, signals and filtering, advanced probability theory, and numerical methods. Concepts will be studied in a mathematically rigorous way but will be motivated with robotics examples throughout the course.*

**Qualifications**

An academic background in machine learning and computational/numerical methods studies is required. An undergraduate degree in a robotics discipline such as control and mechatronics, and graduate research in the area are also required. A graduate degree in Robotics is preferred. Knowledge in robotics and mechatronics is a further requirement. Strong knowledge of robotic sensing, control, and spatial perception is required. Knowledge of engineering mathematics with emphasis on complex variables and ordinary differential equations.

**Relevant Criterion**

The need to acquire experience is the more relevant criterion than past teaching experience in respect of this posted position.

**Duties**

- Developing syllabus.
- Teaching twice weekly: Fridays, 10:00-12:00 and Wednesdays, 12:00-14:00.
- Conducting scheduled office hours for academic counselling of students.
- Leading tutorials or laboratories/practicals.
- Evaluation of tests and the final examination.

*Duties of this position shall be performed at the campus on which the position is located.*

**Estimate of TA Support:** 1 TA at 70 hours

**Estimated Course Enrolment:** 80 students

**Rate of Pay:** \$8,142.51 (per half course excludes vacation pay) or \$9,123.38 (per half course excludes vacation pay) if first CI appointment.

**Application Process**

Applicants should submit a cover letter, C.V. (including previous teaching evaluations (if applicable)), and a list of references by **July 24, 2023**. Applications should be sent to:

**Carmela Versace, Manager**  
Institute for Aerospace Studies  
4925 Dufferin Street  
Toronto, ON M3H 5T6  
E-Mail: [manager@utias.utoronto.ca](mailto:manager@utias.utoronto.ca)

The University strives to be an equitable and inclusive community, and proactively seeks to increase diversity among its community members. Our values regarding equity and diversity are linked with our unwavering commitment to excellence in the pursuit of our academic mission. The University is committed to the principles of the Accessibility for Ontarians with Disabilities Act (AODA). As such, we strive to make our recruitment, assessment and selection processes as accessible as possible and provide accommodations as required for applicants with disabilities. If you require any accommodations at any point during the application and hiring

process, please contact [uoft.careers@utoronto.ca](mailto:uoft.careers@utoronto.ca). During employment, to request accommodation from the University, contact the supervisor or department chair and/or Health & Wellbeing Programs & Services at [hwb@utoronto.ca](mailto:hwb@utoronto.ca). For more information about accommodations at U of T, please visit our Accommodation webpage.

The hiring criteria for Course Instructors positions are academic qualifications, the need to acquire experience, previous teaching experience and previous satisfactory employment under the provisions of this Collective Agreement.

The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from racialized persons / persons of colour, women, Indigenous / Aboriginal People of North America, persons with disabilities, LGBTQ2S+ persons, and others who may contribute to the further diversification of ideas.

Candidates who are members of Indigenous, Black, racialized and LGBTQ2S+ communities, persons with disabilities, and other equity seeking groups are encouraged to apply, and their lived experience shall be taken into consideration as applicable to the position.

This job is posted in accordance with the CUPE 3902 Unit 1 Collective Agreement.

The position(s) posted above is (are) tentative, pending final course determinations and enrolments.

Positions posted here are open to Graduate Students in the School of Graduate Studies, Postdoctoral Fellows and Undergraduate Students in the University of Toronto.