

# Ph.D. PROGRAM IN ROBOTICS

The objective of the Ph.D. Program in Robotics is to educate a new generation of researchers in the area of robotics. The program includes multidisciplinary coursework and research and teaching needs are served by the commitment of current full-time faculty members in participating units across campus. The Institute for Robotics and Intelligent Machines (IRIM) has more than 100 faculty members actively engaged in robotics research.

## Overview

The minimum requirements for each student in the Ph.D. Program in Robotics are:

1. Completion of 36 semester hours of courses with a letter grade in:
  - a. Introduction to Robotics Research (3 semester hours)
  - b. Three foundation courses, each selected from distinct core areas (9 semester hours)
    - Mechanics
    - Controls
    - Perception
    - Human-Robot Interaction
    - Artificial Intelligence & Autonomy
  - c. Three targeted elective courses, each selected from the same three core areas used for the foundation courses (9 semester hours)
  - d. Multidisciplinary Robotics Research I and II (6 semester hours)
  - e. Three courses outside the major area to provide a coherent minor in accordance with Institute policies (9 semester hours)

- f. A maximum of two elective classes (6 semester hours) at the 4000 level may be used to satisfy the 36 semester hour requirement

2. Passing a comprehensive research-based oral exam and maintaining a minimum core GPA.
3. Successfully conducting, documenting, and defending a piece of original research culminating in a doctoral thesis.

Georgia Tech defines the official admission to Ph.D. candidacy with the following requirements for all students:

1. Complete all course requirements, except the minor coursework
2. Achieve a satisfactory scholastic record
3. Pass the comprehensive examination
4. Submit and receive approval naming and delineating the dissertation topic

[phdrobotics.gatech.edu](http://phdrobotics.gatech.edu)



**MEDICAL ROBOTICS AND  
HUMAN AUGMENTATION**



**COLLABORATIVE ROBOTICS**



**AUTONOMY**

## Currently Enrolled BS/MS Students

Students apply to the Ph.D. Program in Robotics through one of the five participating units, which will serve as their home unit. As part of the minimum requirements, students must satisfy all of the specific admission requirements of the home unit.

The Ph.D. Program in Robotics committee, in coordination with the student's home unit, will make final admission decisions. Decisions are based on a combination of factors, including academic degrees and records, the submitted statement of purpose, letters of recommendation, test scores, and relevant work experience. Also considered in the process is the appropriateness of the applicant's goals to the program, as well as the applicant's anticipated ability to conduct original research. Strategic efforts are made to recruit women and members of underrepresented minority groups.

## Currently Enrolled Ph.D. Students

Current students should communicate with their home-unit representative serving on the Ph.D. Program in Robotics committee that they are interested in transferring into the program. (Visit [phdrobotics.gatech.edu](http://phdrobotics.gatech.edu) for details.) The applicant must submit a program of study form signed by a faculty member (usually the student's current advisor), as well as a résumé, current transcript, statement of purpose, letter of recommendation, and any additional materials the applicant wishes to be considered.

At the next scheduled meeting, the Ph.D. Program in Robotics committee will review the student's application. If accepted into the program, the student will be notified to submit a change of major form through their home unit, thus changing their Ph.D. degree program to robotics.

## Quick Facts

- Georgia Tech's program is the first of its kind in the United States.
- The unique program includes curricula from both interactive computing and four engineering disciplines: aerospace, biomedical, electrical, and mechanical.
- IRIM serves as the flagship for Georgia Tech's robotics efforts, coordinating the Institute's capabilities in this field under one roof.
- Currently, more than 100 Georgia Tech faculty members actively conduct robotics research.
- Georgia Tech is consistently the only technological university ranked in *U.S. News & World Report's* listing of America's top ten public universities.

**Mechanics**

**Controls**

**Perception**

**Human-  
Robot  
Interaction**

**AI and  
Autonomy**