

GEORGIA INSTITUTE OF TECHNOLOGY
SCHOOL OF ELECTRICAL & COMPUTER ENGINEERING
Syllabus: UROP+ ORS Fall Research Project

UROP+ ORS Fall Research Project

ECE 3951/4951 (depending on student academic level): 1-credit of pass/fail UROP

ECE 2901/3901/4901 (depending on student academic level): 1-credit of A-F special problems with Dr. Shanthi Rajaraman

Unscheduled

Course Websites: Canvas

INSTRUCTOR INFORMATION:

Instructor

Dr. Shanthi Rajaraman

Email shanthi at

ece.gatech.edu

Office Hours & Location

TBD, Van Leer 468

COURSE INFORMATION

Description

This course leads students through the Fall term of an ORS research project who chose to participate in the UROP+ option, where Fall term consists of 1-credit P/F UROP course (ECE3951/4951) and 1-credit A-F Special Problems course (ECE2901/3901/4901) with Dr. Shanthi Rajaraman. It is expected that students will enroll in the ECE3952/4952 UROP 2-credit A-F course in the following spring term. Students learn about the research process by performing a team research project embedded in a Georgia Tech laboratory, shepherded by a PhD mentor.

Course Goals and Learning Outcomes

Students will develop technical depth and expertise in electrical and computer engineering, relevant to their laboratory exploration. Additionally, students will gain experience and knowledge in research conduct, research documentation, team collaboration skills, oral technical presentation, research proposal, research poster and research paper preparation.

Graded Components (for 1-credit A-F special problems course)

Assignment	Weight	Assignment	Weight
Qualified Laboratory Hours	60%	Literature Review	05%
Research Presentation	05%	Research Proposal	05%
Workshop Attendance	05%	Mentor Evaluation	20%

Description of Graded Components

Qualified Laboratory Hours (QLHs) are hours spent working on your research project, most of which will likely be in the student's host laboratory. QLHs are graded for completeness and quality, based on mentor evaluation of the work. To receive a passing grade in the 1-credit P/F UROP component, the student must work at least 3 QLHs per week, averaged over the semester.

The 1-credit A-F grade is based on QLHs beyond the first 3 hours/week used to satisfy the pass/fail UROP credit. Full credit for the QLH component will be given for students that average at least 3 hours/week beyond the 3 QLHs used to satisfy the UROP pass/fail credit. Thus, a student should expect to work at least 6 QLHs per week, averaged over the semester course, to expect to receive full credit and the highest possible grade for the special problems portion of this study. Other assignments, *which are graded for completeness*, include

literature review, research proposal, participation in team research presentations, and attendance in ORS required events (missing no more than 2 required events if at all) in the fall semester. Finally, a mentor/host faculty evaluation of the student efforts and performance on their research team will contribute to the final grade.

For all assignments and projects, late work is not accepted. Special accommodations can be made for medical emergencies, interviewing, and other important events, but only if sufficient advance notice is given to (and permission granted by) the instructor ahead of time.

Grading Scale

This course uses a traditional A (>90.0), B (>80.0), C(>70.0), D(>60.0), F(<60.0) grade scale unless special circumstances require a curve to achieve the recommended course GPA as specified by the ECE course catalog, which should be between 3.0 and 3.5, inclusive. Grades can only be curved upward, not downward.

Classroom Management

The meetings and laboratory hours for this course are unscheduled. A schedule for mandatory workshops, seminars, and other ORS milestones will be provided at the beginning of each semester.

COURSE MATERIALS

Course Text:

No formal course text. Notes, readings, and assignments will be disseminated throughout the semester.

COURSE EXPECTATIONS & GUIDELINES

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For information on Georgia Tech's Academic Honor Code, visit <http://www.catalog.gatech.edu/policies/honor-code/> or <http://www.catalog.gatech.edu/rules/18/>. Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Collaboration & Group Work

It is expected that each student upholds the Georgia Tech honor code when preparing work for this class. Everyone must turn in their own work (or group's work where specified) without contribution from another person or source.

Accommodations for Individuals with Disabilities

If you are a student with learning needs that requires special accommodation, contact the Office of Disability Services at (404)894-2563 or <http://disabilityservices.gatech.edu/>, as soon as possible to make an appointment to discuss your special needs and to obtain an accommodation letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Student-Faculty Expectations

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See <http://www.catalog.gatech.edu/rules/22/> for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.