

**Organization Name:** Georgia Tech Facilities Design and Construction

**Organization Contact Person:** Maria del Mar Ceballos

**Contact Phone:** (470) 363-7364

**Contact Email:** mceballos6@gatech.edu

**Organization Mission:** Facilities D&C is responsible for providing architectural, design and construction services for campus buildings and utilities. Our department is committed to ensuring that our campus is an increasingly efficient steward of environmental resources and strive to keep GT at the forefront of Sustainable building practices. Understanding the intrinsic relationship between health and happiness and the buildings we occupy; our department is incorporating innovative practices around occupant health and social equity around construction.

**Internship Semester:** Summer 2020

**Project Title #1:** Modeling Renovation Projects for Energy Efficiency

**Keywords:** energy, modeling, sustainability

**SLS Priority Issue Areas:** Climate Change, Green Infrastructure, Water, Citizen Science

**Project Background:** Large capital projects on campus often get the benefit of full energy model testing by hired consultants. Our smaller renovation projects on campus rarely if ever get the benefit of an energy analysis and yet they make up a large percent of our department's work. The projects are numerous cover a wide range of programs types: offices, student spaces, classrooms, and laboratories. Each type, and each building presents, unique opportunities for energy efficiency, daylighting and environmental comfort. We are looking to build our in-house capability for testing design solutions on our smaller projects that allow us to make better decisions throughout our portfolio of work. The intern will be working with the Department's Building Information Modeling and Virtual Design and Construction Manager and members of the in-house engineering team.

**Project Timeline:** The intern would work on projects that are in production in the office at the time. How many are completed will depend on the size and scope of what is being worked on during the summer. The student would be testing different modeling methods for efficiency and accuracy. The student's work will likely inform how the department proceeds with in-house energy modeling.

**Desired skills and qualifications:** Revit modeling, electrical engineering or architectural

**Deliverables:** energy models, Presentation to D&C staff

**Project Title #2:** Occupant Health Condition Assessments

**Keywords:** wellness , building , assessment

**SLS Priority Issue Areas:** Climate Change, Community Health, Green Infrastructure, Water, Citizen Science, UN Sustainable Development Goals (SDGs)

**Project Background:** Recent new construction projects on campus have used industry guidelines to help inform design decisions that prioritize the health of the students, faculty and staff that will occupy the space. We are now looking to understand how our existing buildings are impacting many of the same areas of human health and comfort that the fitwell certifications take into consideration. This project will pilot applying the checklist for fitwell to a variety of existing buildings on campus to measure their wellness status. The intern will be working with the Building Information Modeling and Virtual Design and Construction manager.

**Project Timeline:** The student will complete the pilot project over the course of the summer and offer a presentation to department staff. The student's findings may help influence the department's continued efforts in this program.

**Desired skills and qualifications:** interest in building design or construction, interest in sustainable architecture

**Deliverables:** Fitwell checklists for multiple buildings, Presentation to D&C staff