

Capstone Programs and Project Examples:

Participation in an SLS-sponsored capstone with any department comes with a **\$500 per semester/per project stipend** from SLS (with the exception of ME projects, due to a different departmental fee structure). SLS also identifies a **Subject Matter Expert** for teams needing additional support in understanding, specifically, equity implications of the project and proposed deliverable; SMEs are usually faculty at GT, but in some cases they are partners at other universities or organizations.

Industrial and Systems Engineering (ISYE): These students consult for organizations on systems design and improvement; their specialties are supply chain and data analysis, and systems optimization.

Project Length: two semesters “pre-design” and “senior design”- spanning summer and fall or fall and spring

Other details: 6-8 students per team each expected to spend approximately 10 hours per week on the project; rough commitment of 2-4 hours per week requested of partner

Example: Boys & Girls Club of Metro Atlanta (BGCMA): In the fall of 2019, an ISyE Senior Design team re-designed BGCMA’s transportation system. By optimizing the bus routes of BGCMA’s 21 clubs that serve 3,000 students across 108 schools, the student team calculated the proposed system design would save BGCMA \$30,000 in annual fuel spending—in turn, this \$30,000 may be reinvested into BGCMA’s programming for the benefit of students and staff.

How to submit a project: contact Ruthie at SLS (ruth.yow@gatech.edu) and Lauren Silver in ISYE (lauren.silver@isye.gatech.edu)

Mechanical Engineering (ME): These students are usually tasked with creating prototypes or models of new designs, going through the steps of “defining functional requirements, conceptualization, analysis, identifying risks and countermeasures, selection, and physical prototyping when applicable.”

Project Length: one semester- summer or fall or spring

Other details: 4-8 students per team each expected to spend approximately 10 hours per week on the project; rough commitment of 2-4 hours per week requested of partner

Example: Atlanta Food & Farm: In the fall of 2017 and spring of 2018, two different teams worked with Atlanta Food and Farm on a mechanized composter for small to medium-sized farms, with too much compost to efficiently hand-turn their piles. The second team redesigned the composter prototyped by the first to make it cheaper to produce and therefore more affordable for growers/farmers.

How to submit a project: contact Ruthie at SLS (ruth.yow@gatech.edu) and Amit Jariwala in ME (amit.jariwala@gatech.edu)

Computer Science (CS) Junior Capstone: These students can build software and applications. Website design and modification is typically not challenging enough for the teams to take on as a project.

Project Length: two semesters- with a new “cycle” of projects beginning every summer, fall, and spring

Other details: 4-6 students per team; rough commitment of 2-4 hours per week requested of partner

Example: PlantLanta: In the fall of 2019 and the spring of 2020, a team of four students worked with PlantLanta on a volunteering app. The app- an event tracker and reward system—is designed to “help PlantLanta encourage community service in the metro Atlanta area.”

How to submit a project: contact Ruthie at SLS (ruth.yow@gatech.edu) and Amanda Girard (amanda.girard@cc.gatech.edu)

Civil and Environmental Engineering (CEE): Students work on green and gray infrastructure related projects; SLS-sponsored teams have often worked with stormwater management.

Project Length: one semester, typically spring

Other details: 4-8 students per team, rough commitment of 1-2 hours per week requested of partner

Example: West Atlanta Watershed Alliance: Students worked with WAWA to analyze hydrological data and trash trap designs to plot ideal locations for large trash traps along Proctor Creek, where large debris compromises creek and ecosystem health.

How to submit a project: contact Ruthie at SLS (ruth.yow@gatech.edu)

Public Policy “Task Force” Capstone: Students work in subgroups, with each member responsible for a substantive project paper that to be presented and defended before the group, the instructor, and the outside evaluator, then integrated into a team report; areas of focus include environmental policy, social and urban policy, and science and technology policy.

Project Length: two semesters

Example: Safe Routes to School: A team of four Master’s in Public Policy students worked with a veteran community organizer and advocate for child- and youth-centered transportation planning to evaluate youth participation practices in transportation planning and develop recommendations for facilitating increased youth participation in transportation planning.

How to submit a project: contact Ruthie at SLS (ruth.yow@gatech.edu)