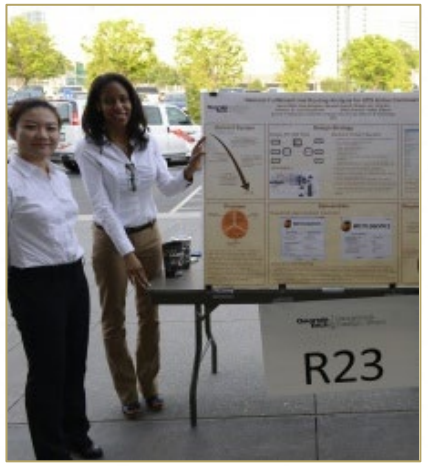
Collaborating with ISyE

MS SCE Capstone Projects



https://www.isye.gatech.edu/mssce-capstone

Georgia Tech College of Engineering
H. Milton Stewart School of
Industrial and Systems Engineering

MS SCE Program

Graduate Students

The Master of Science in Supply Chain Engineering (MS SCE) is a graduate degree program focused on professional practice in the supply chain domain. It was created to meet a growing demand for business-savvy industrial engineers who can design and synchronize highly complex global supply chains.

The program's intensive 12-month curriculum arms students with skills in analytic methods, supply chain engineering, and enterprise management while building professional practice skills and immersing students with real-world industry experience.

MS SCE Capstone Project

What Is It?

The summer (May-July) term* is dedicated to the **Capstone Industry Project** where MS SCE students identify and define a supply chain design and/or analysis problem to be addressed with quantitative modeling.

Projects are conducted with partners from business, government, or non-government organizations.

**Most students complete their Capstone Project during the summer term while enrolled half time. Others choose to delay the Capstone until the following fall term and use the summer to instead conduct a full-time internship or to travel.*

MS SCE Capstone Project

What Is It?

Students work either individually (internships) **or in a small team** (3-5 students) **to address a client's supply chain engineering related challenge.**

- 40+ students, ~15 companies participating each summer
- Focused on using analytical methods to provide significant value to client
- Each team has a unique project

MS SCE Capstone Project

Company Benefits

- Access to a team of graduate students and a faculty advisor familiar with the tools, methodology and analytical approaches needed to address a supply chain engineering challenge through quantitative modeling
- Teams work as outside consultants on well-defined, specific design activities
- Implementable ideas, supporting analysis, prototype software (when applicable) when the project is complete

MS SCE Capstone Project

Project Requirements

- **Methodology**. The project must require the use of significant supply chain engineering tools and methods. Students are armed with a toolkit for conducting quantitative analysis of supply chain problems, and the goal of the project is to deploy tools in the study of a real-world problem or question.

- **Value**. Each team member is expected to spend a minimum of 200 productive hours on the project, which includes time developing reports and delivering oral presentations. The scope of the proposed project, and the value of the project delivered to the client is consistent with this expectation.

MS SCE Capstone Project

Sample Topics

- Activity valuation
- Capacity management
- Customer service enhancement
- Distribution network design
- Equipment replacement planning
- Flow management
- Inventory planning
- Materials handling
- Pricing strategy
- Preventative maintenance scheduling
- Process design/redesign
- Production scheduling
- Supply chain design
- Vendor selection
- Waste reduction
- Workforce scheduling

MS SCE Capstone Project

Client Expectations

- **Selection of an accessible primary contact/champion** for the student group or individual
- **Ability to organize client-side interaction** (arrange meetings and site visits as necessary, field questions, etc.)
- **A commitment to providing access to data**
- **True interest in the project** (real value and not busy work)

MS SCE Capstone Project

Client Issues

NDAs (Non-disclosure agreements)

- Students may sign, but faculty needs Georgia Tech Legal to approve https://osp.gatech.edu/nda

  Approval can take a long time – understand the consequences of a delay

Ensure students are allowed to…

- Discuss the work with their advisor and present to the SD coordinator for grading
- Talk about your project in job interviews, possibly with competitors and after graduation

MS SCE Capstone Project

Phases

The capstone project has three major phases:

- **Project Identification Phase**. During this phase, students identify a project topic area and a sponsoring organization. Groups are formed, if applicable. Students prepare a one-page Project Identification document and submit it for approval. This phase ends with the project topic area and group approved by the MS SCE Faculty Director.

- **Project Definition Phase**. The problem to be solved or research question to be answered, deliverables, and project plan are defined. At the end of this phase, the written Proposal and oral Proposal Presentation spell out a work plan and the proposed methods that will be employed to deliver results.

- **Work Phase**. Data are collected and validated; analysis is conducted; and conclusions or recommendations are generated. At the end of the work phase, a written Final Report detailing the project, methods used, and results are provided. This is followed up by an oral report.

MS SCE Capstone Project

Timing

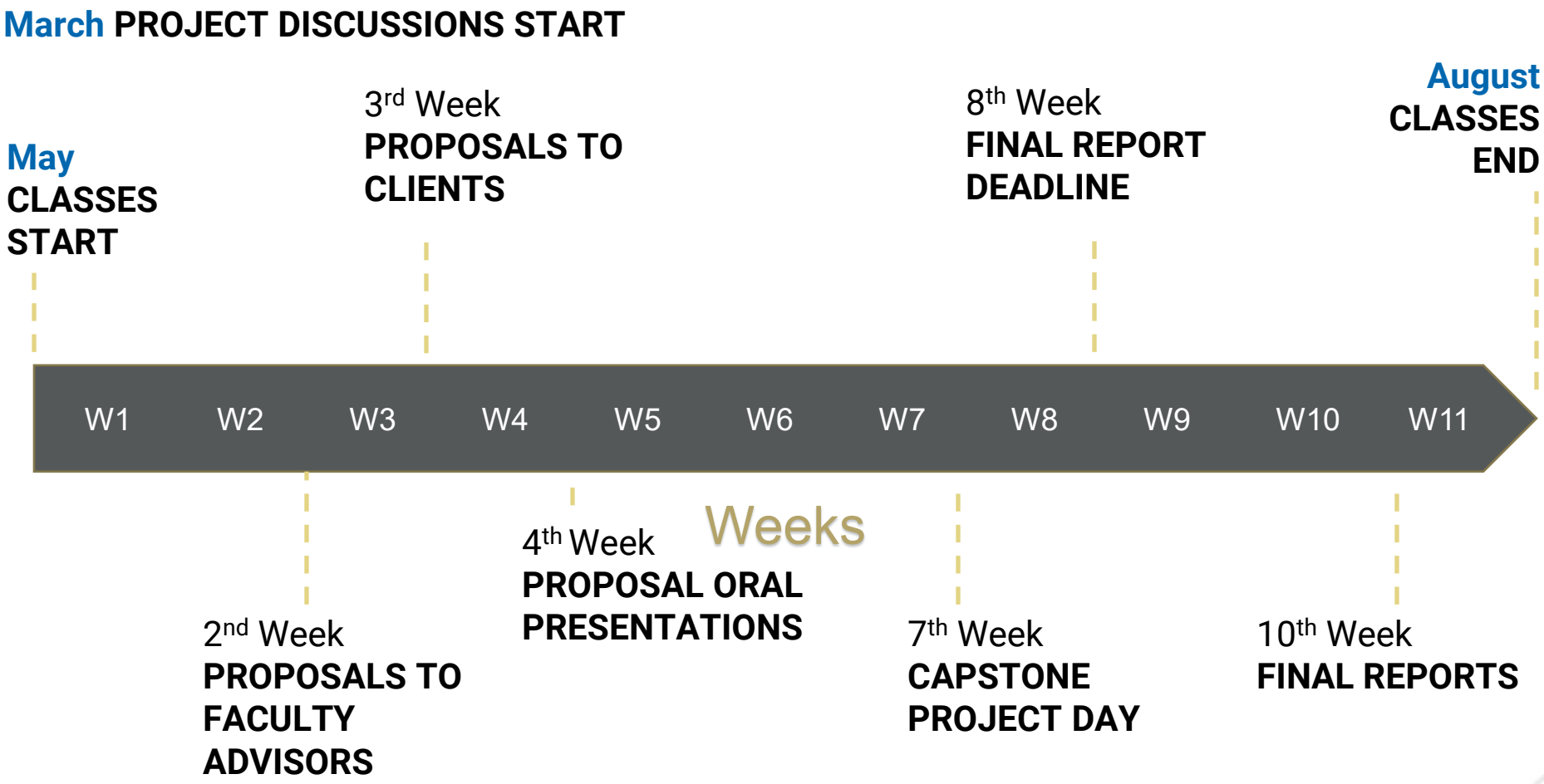
Students select their Capstone project the semester before they start working on it

Submitting projects **at least 60-90 days before the starting semester** will ensure that students have sufficient time to select and plan for it.

- Summer 2025 (starts mid-May 2025): Submit by March 2025
- Summer 2026 (starts mid-May 2026): Submit by March 2026
- Summer 2027 (starts mid-May 2027): Submit by March 2027
- Summer 2028 (starts mid-May 2028): Submit by March 2028
- Summer 2029 (starts mid-May 2029): Submit by March 2029
- Summer 2030 (starts mid-May 2030): Submit by March 2030

MS SCE Capstone Project

Typical Timeline (actual schedule may vary)



MS SCE Capstone Project
Timing for Summer

- **Summer Semester** starts the third week of May and ends the first week of August.
  - **March (end of)**: Organizational Meetings, GT campus
  - **April (3rd week)**: Project Identification Document Approval Deadline
  - **May (last week):** Proposal (Written) Deadline
  - **June (1st week)**: Proposal Oral Presentation Deadline
  - **July (3rd week)**: Capstone Project Day (Final Orals)
  - **July (last week):** Final Report Deadline

MS SCE Capstone Project

Proposing/Sponsoring a Project

To submit a Capstone Project for consideration, please visit the below link.

https://eforms.isye.gatech.edu/projects/submit-ms-sce-capstone-project

MS SCE Capstone Project

Questions

For more information about sponsoring a Capstone Industry Project, please contact Chris Gaffney of the Supply Chain and Logistics Institute or the Faculty Director of the MS Supply Chain Engineering Program, Professor Alan Erera.

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