

ISyE 4301 Syllabus

Supply Chain Economics ISyE 4301, 3 Credits

Fall 2026

Instructor Information

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General Course Information

Description

This course introduces students to the principles of microeconomic analysis and game theory applied to decision-making in supply chains. Emphasis is placed on strategic interactions among decision makers in the supply chain, including suppliers, manufacturers, retailers, and consumers. Topics include classical microeconomics, demand and production theory, pricing and revenue management, competition and cooperation between firms, information asymmetries, contracts, and incentives in manufacturing, logistics, and service systems.

Course Learning Outcomes

- Apply game theory to competitive interactions in supply chain settings.
- Apply basic theory of collaboration to strategic decisions in supply chains.
- Quantify economic forces in supply chains, including scale, scope, uncertainty, sharing, uniformity, and speed.
- Develop defensible solutions and present results in team assignments.
- Consider ethical and professional responsibilities in supply chain decisions.

Required Course Materials

- Lecture slides and course materials will be posted on Canvas.
- Steven Tadelis, Game Theory: An Introduction.
- Chen Zhou, Supply Chain with Economics and Human Needs, Barnes & Noble, May 2022. A PDF version is available from Chen Zhou's Georgia Tech website: sites.gatech.edu/chen-zhou

Grading Policy

Your final course grade will be based on the components below.

Component	Weight
Homework	15%
Participation	5%
Quiz 1	20%
Quiz 2	20%

Final Exam	40%
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Grading Scale

A: 90-100% | B: 80-89% | C: 70-79% | D: 60-69% | F: 0-59%

Description of Graded Components

Homework assignments will be posted on the course website with associated due dates. Submitted solutions must be written in your own words. There will be two in-class quizzes, each worth 20% of the final grade, and a final exam worth 40%. Quizzes and the final exam are in class and closed notes.

Course Policies

Attendance and/or Participation

Students are expected to attend class, either in person or virtually, and actively participate in class discussion. Participation may include standard in-person participation, asking/answering questions on Piazza, and participation through course activities such as MobLab games.

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 and to comply with [Georgia Tech's Academic Honor Code](#) and Student [Code of Conduct](#).

Any student suspected of cheating or plagiarism 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.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the [Office of Disability Services](#) at (404) 894-2563 as soon as possible to discuss your needs and obtain an accommodations letter. Please also email me as soon as possible in order to set up a time to discuss your learning needs.

Student-Faculty Expectations Agreement

At Georgia Tech, we strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and students. The [Student-Faculty Expectations](#) articulate the basic expectations students may have of faculty and faculty may have of students. 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 class.

Pre- &/or Co-Requisites

ISyE 3133 Engineering Optimization; ISyE 3232 Stochastic Manufacturing and Service Systems.

Collaboration, Group Work, and Use of Generative AI

You are allowed to work in groups on all homework assignments, but you must submit your own written solutions in your own words. Quizzes and exams are ***in class*** and will be ***closed*** notes.

Generative AI policy: Generative AI tools (e.g., ChatGPT, Claude, Gemini) may be used as learning aids in this course. For example, you may use them to clarify concepts, generate additional practice problems, check calculations, or obtain feedback on your reasoning. However, graded assignments are intended to assess your own understanding. If you use a generative AI tool to complete any part of a homework assignment, you must submit the associated AI conversation(s) along with your homework, including the prompts you provided and the responses you received. There is no penalty for appropriately disclosed use of generative AI. Regardless of whether generative AI is used, students are responsible for understanding all work they submit and should be prepared to explain the reasoning behind their solutions. If questions arise regarding authorship or the use of generative AI, the instructor may ask a student to explain or reproduce key steps in their solution. Using generative AI without the required disclosure constitutes undisclosed assistance and a violation of the course policy and may be referred to the Office of Student Integrity in accordance with [Georgia Tech's Academic Honor Code](#).

Extensions, Late Assignments, & Re-Scheduled/Missed Exams

There will be a 30% deduction for a late submission each day past the due date. A submission that is one minute late is considered one day late.

We only accept notifications from the Dean's office for institute approved absences and the links to the online request forms can be found here: <https://registrar.gatech.edu/info/institute-approved-absence-form-for-students>

Please inform the instructor of your approved absences in a timely manner. If the notification from the Dean's office is for the instructor's discretion and your absence prevents you from completing assignments or tests, please discuss the accommodations with the instructor as soon as possible. Since it may be difficult to create an equivalent make-up test or assignment after course materials or solutions have been released, the accommodation may take an alternative form that assesses the same learning objectives, such as a substitute assessment or an appropriate reweighting of other course components.