

# ISyE 4803/8803 Syllabus

System Design for Industrial Engineers, 3 Credits

Fall 2026

## Instructor Information

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## General Course Information

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### Description

Design methodology and design decision-making for systems in which discrete objects flow through a network of resources where value is added by discrete processes. Examples include warehouses, factories, supply chains, medical clinics and hospitals among others.

### Course Learning Outcomes

At the end of this course, students will be able to:

- Understand, describe and discuss context as it impacts industrial engineering system design decisions
- Specify at an appropriate level of detail a system's products/services, resources, processes and controls in supporting system design
- Identify and articulate system operational requirements
- Translate system operational requirements into system functional requirements with appropriate supporting decision analyses
- Elaborate system functional requirements into system logical architecture with appropriate supporting decision analyses
- Elaborate system logical architecture into system physical specification with appropriate supporting decision analyses

### Required Course Materials

Course notes, available on Canvas

### Grading Policy:

A $\geq$ 90; B $\geq$ 80; C $\geq$ 70; D $\geq$ 60

Grade components:

- Attendance, 10%
- Individual assignments, 10%
- Team assignments, 15%
- Team Design Cases (2), 40%
- Peer evaluation, 20%
- Individual participation, 10%

### **Description of Graded Components**

*Assignments* are small homework assignments to demonstrate facility with concepts and software tools and may be assigned individually or to teams. *Design cases* are large scale case studies. *Individual participation* is through in-class discussion and contributions to on-line documentation of materials that contribute the understanding of system design in the ISE context.

### **ISyE 8803 Students**

Graduate students may be given homework and project assignments that are different from the ISyE 4803 students.

## **Course Policies**

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### **Attendance and/or Participation**

This will be an active classroom, where you will be expected to participate. Attendance will be recorded. Remote attendance will be counted only if there is corresponding participation by asking/answering questions.

### **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. Review [Georgia Tech's Honor Code](#) and the 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](#) (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations 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 Agreement**

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. Please observe what is expected of you and what you can expect as listed in the Student-Faculty Expectations developed jointly by the SGA and faculty: [XXII. Student-Faculty Expectations | Georgia Tech Catalog \(gatech.edu\)](#).

## **Pre- &/or Co-Requisites**

Undergraduate senior or graduate student status.

## **Collaboration, Group Work, and Use of Generative AI**

For team assignments there is only one submission per team. Each team assignment has an associated peer evaluation intended to reflect the relative contribution from each of the team members. For individual assignments, feel free to discuss with classmates, but ***the submitted work must be your own***. accommodations letter. Please also e-mail me as soon as possible to set up a time to discuss your learning needs. Feel free to use any AI tools you wish—in fact I often use them myself for exploring topics. However, in your submitted work, any AI-generated content must be identified and referenced, just as you would reference material taken from a book or journal paper.

## **Campus Resources for Students**

Georgia Tech provides a number of student services, including the library (librarians, data bases, extensive access to archived publications), the Communication Center, the Counseling Center, The Division of Student Life, and Women’s Resource Center. If you find yourself struggling with any aspect of Tech life, there are resources to help you.

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

Late homework will be penalized accordingly. With all the uncertainties involved, please do not wait until the last minute to attempt to submit. If you do have a technical submission issue, please contact the TA or instructor. You can submit written request for re-grade after you check against the solutions and within 1 week after the solutions are provided.

We only accept notifications from Dean's office or Institute Approved Absences with the links to the online request forms below. [https://gatech-advocate.symplicity.com/care\\_report/index.php/pid167160](https://gatech-advocate.symplicity.com/care_report/index.php/pid167160) <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 Dean's office is for 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 is difficult to create a different but fair test, and solutions to assignments already may have been published, the accommodation might not be a makeup test or assignment.