

COURSE OUTLINE
IE 443 Senior Project I
Fall 2025

Instructor: Dr. Layek Malek

Office : Mech. 302

Phone : 973 596 3648

Office Hours: Thursday 4:30-5:30 and by Appointment

Objective

The senior project provides students with hands on experience where they are assigned a problem in a factory, service facility, hospital, etc. Teams of 3-4 students are assigned a project for two semesters with an industrial partner; such students are supervised by both a faculty member and a member of technical staff from industry. The expectation for this year's IE 443 is as follows;

- Students form groups consisting of 3 or 4 members and elect a group representative
- By the 2nd week of the semester groups are expected to select from the list of projects the one of their interest
- By the 3rd week students visit the facility to collect the needed information and consult with industrial personnel
- A road map is presented by the students to the faculty and the industrial partner for their suggestions and approval (By the 4th week)
- Progress reports are made thereafter on a bi-weekly basis to the professor and the industrial partner in which the necessary literature search is presented and the data required are collected.
- In the last week of classes each group will submit a preliminary report and make presentation to show the approach that will be followed to address the final objective of the projects and progress made towards that end.

Grading

Each member of a group will get the same grade. When joining a group synergy among its member is expected. Interim progress reports will count for 1/3 of the semester's grade, the preliminary reports will count for 1/3, and the presentation for the other 1/3*.

Class operation

After the two introductory weeks, each group will meet individually at least once every two weeks to discuss progress made and seek advice to move forward. The meeting time will be arranged according to teach group and the instructor's convenience.

*Presentation may be held or not based on CDC guidelines at that time

2025/ 2026 Projects (Project description attached)