# MSE 426/726 Project Description

## Project 1 (for both classes)

This project focuses on the application of what you learn in the course to your self-formulated problems. Problems can be formulated from your everyday life, previous courses, or else.

### Requirements:

1. Formulate the optimization problem

* At least four variables
* At least one nonlinear equation
* One or more constraints
* Each person formulates his/her own problem

1. Solve the formulated problem

* Apply at least two solvers from three (fmincon, GA, or OASIS) to solve the problem

1. Analyze and justify the optimization results

Report due dates

MSE 426 April 14, 2021 (both report and 3-minute video)

MSE 726 March 23, 2021 (both report and 3-minute video)

Write <1500 word report for Project 1. Please find the rubrics from Canvas

## Project 2 (MSE 726 Only): Research report on design optimization

This project has to be research based. Candidate topics will be given later in class; students can also initiate topics of research nature. Continuation of Project 1, if of research nature, may also be accepted. Project 2 topics have to be approved by the instructor and should start as early as possible. This project could be individual (no award) or from a group of two.

Report due date:

April 23, 2021 (both report and 3-minute video)

Write a report less than 3000 words for Project 2. With almost no exception, any late submission is subject to a 20% deduction of the full mark per day including weekends.