

**FALL
2025**

DATA SCIENCES + OPERATIONS

DSO 577

Optimization Modeling for Prescriptive Analytics

Mon/Wed 11am-12:20pm JKP 104

INSTRUCTOR: Prof. Peng Shi

✉ pengshi@usc.edu Units: 3

WHY TAKE THIS COURSE?

Refine your problem solving skills.

Learn mathematical modeling.

Harness the power of mixed-integer optimization to improve business operations.

Become change makers in future organizations!

Learning Objectives:

Upon completing the course, you will be able to:

- 1. Formulate** linear optimization models to inform a business decision.
- 2. Implement** the models using Python and Gurobi.
- 3. Communicate** the insights with both technical and non-technical audiences.

Applications:

business strategy; inventory management; revenue management; resource allocation; matching; scheduling; portfolio optimization...

Pre-requisite:

At least one semester of Python programming.