

# DATA SCIENCES AND OPERATIONS

Fall 2023

## DSO 547 – Spreadsheet Modeling for Business Insight

Section – 16304R

### Professor

Phil Rogers

### Email

[phil.rogers@marshall.usc.edu](mailto:phil.rogers@marshall.usc.edu)

### When

Tu/Th 5:00 - 6:20

### Office

Bridge 400E

### Units

3



## WHY TAKE THIS COURSE?

Learn how finance professionals, business analysts, quant-savvy entrepreneurs, and management consultants use spreadsheet modeling to solve business problems, drawing insights and building projections in the face of uncertain conditions.

## COURSE OBJECTIVES

This course will enable students to build models of unstructured business problems so they can make better decisions and gain insight into the impact various factors have on those decisions.

## KEY CONCEPTS

- Spreadsheet Modeling
- Sensitivity Analysis
- Monte Carlo simulation
- Optimization
- Resource allocation
- Financial Modeling
- Scenario and Risk Analysis

## COURSE DESCRIPTION

Students will learn the creative process of constructing and using spreadsheet models of business problems, specifically how to design, build and test spreadsheets and workbooks, and how to improve the efficiency and effectiveness with which they are used. Topics are explored by learning how to solve problems across a wide variety of business functions (manufacturing, finance, purchasing, marketing, logistics, planning and staffing) and across a wide variety of industries (banking, healthcare, energy, telecommunications, packaged goods, utilities, airlines, etc.), often using tools and techniques from the field of management science that are built into Excel.