

DATA SCIENCES AND OPERATIONS

SPRING 2024 SEMESTER

DSO 427

Spreadsheet Modeling for Business Insights

Section – 16214R

Professor

Cosimo Arnesano

Email

arnesano@marshall.usc.edu

When

Tue/Thu; 8:00 AM – 9:50 AM

Office

BRI 401 O

Units

4.0



WHY TAKE THIS COURSE?

This course will focus on the structure, solution and analysis of managerial problems using Excel spreadsheets. The goal is to train you to become an effective modeler who can build sound models to solve business problems, and then draw meaningful insight from those models. This course does not intend to teach you all you need to know about Excel and spreadsheet modeling. In most classes, the format is to use small examples to motivate some business context and learn new quantitative techniques to analyze them along the way. Next, these techniques are applied on larger business data sets using spreadsheets. Real-world significance/implications of methodologies, models, and conclusions are particularly emphasized.

COURSE OBJECTIVES

To become an effective modeler who can build sound Excel models to solve real business problems.

KEY CONCEPTS

- Optimal Resource Planning and Allocation
- Decision Analysis/Contingency Planning
- Risk Analysis/Simulation

COURSE DESCRIPTION

Using MS Excel, we will learn to design spreadsheet models to solve managerial challenges across many industries and functions. The course features structured frameworks to address uncertainty (Monte Carlo simulation), risk analysis (decision trees), resource allocation (optimization), and financial modeling. In addition to spreadsheet modeling, students will learn industry expectations for quantitative analysis and practice the communication skills necessary to drive organizational change.