USC Marshall School of Business

DATA SCIENCES AND OPERATIONS

Spring 2024

DSO 559 – *Intro to Python for Business Analytics*

Section(s) – 16327R

Professor
Austin Pollok

Email
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When
Monday/Wednesday 3:30-4:50 pm

Office
BRI 307J

Units
3.0

WHY TAKE THIS COURSE?

If you are a motivated graduate student with little or no prior programming experience who would like to develop essential competencies in Python's data analytics and modeling tools, then you would be the perfect match for this course. These skills are foundational for every data scientist, analyst, or business manager in today's data-rich economy.

COURSE OBJECTIVES

Upon successful completion, students will be able to:

- Explore data for business insights using Python packages.
- Distinguish between different modeling techniques and implement them in a hands-on environment.
- Formulate and communicate Python programming-based business solutions and data analytics insights to stakeholders from different functional areas and act as a bridge for inter-disciplinary collaboration.

KEY CONCEPTS

- Data preparation in Python
- Exploratory data analysis in Pandas
- Business analytics tools in Scikit-Learn and PyTorch
- Analytical reasoning through modern statistical techniques
- Discover companies that have incorporated analytics into their core business

COURSE DESCRIPTION

This course is concerned with the nuts and bolts of analyzing and modeling data in Python. The primary goal of the course is to offer a guide to the parts of the Python programming language and its data-oriented library ecosystem and tools that will equip you to become an effective data scientist or analyst. Students will progressively learn how to use analytics with data to add value, through Python code, to companies. Learning will be through hands-on business use cases taken from various fields in tech, DeFi, real-estate, image recognition, quantitative finance etc.