

# DATA SCIENCES AND OPERATIONS

FALL 2023 SEMESTER

**DSO 459 - Business Analytics with Python**

Section(s) – 16338R

**Professor**

Austin Pollok

**Email**

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**When**

Mon/Wed, 8:00 – 9:50 AM

**Office**

BRI 307 J

**Units**

4.0



## WHO SHOULD TAKE THIS COURSE?

Motivated undergraduate students with little or no prior programming experience who would like to develop essential competencies in Python’s data analytics and modeling tools. These skills are foundational for every data scientist, analyst, or business manager in today’s data-rich economy.

### COURSE OBJECTIVES

### KEY CONCEPTS

Upon successful completion, students will be able to:

- Explore data for business insights using Python packages.
- Distinguish between different modeling techniques, and implement in a hands-on environment.
- Formulate and communicate Python programming-based business solutions insights from data analytics to stakeholders.
- Act as a bridge for inter-disciplinary collaboration.
- Data preparation in Python
- Exploratory data analysis in Pandas
- Business analytics tools in Scikit-Learn
- 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, through companies. Learning will be through hands-on business use cases taken from companies such as Twitter, Uniswap, Zillow, Walmart, Netflix, Uber, and Optiver.