FALL 2025

DATA SCIENCES + OPERATIONS

DSO 585

DATA-DRIVEN CONSULTING

16335 – Mon | 6:30 PM – 7:50 PM
16336 – Wed | 6:30 PM – 7:30 PM

Instructor: Austin Pollok

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WHY TAKE THIS COURSE?

If you are a motivated graduate student who is looking to dive deep into a hands-on data driven project, then this is the class for you. The intended goal is to give students an opportunity to work on a project that they can showcase to potential employers, as well as give students a place to practice their technical communication skills by presenting to stakeholders. Students can choose their own topic of interest for a project, or the instructor will propose a project to work on.

SCHEDULE OF CLASSES

COURSE OBJECTIVES

Upon successful completion, students will be able to:

- Identify opportunities to apply descriptive, predictive, and prescriptive analytics as a solution for a particular business problem.
- Translate a high-level business objective into a clear and precise data-driven objective.
- Build novel data sets by gathering, cleaning, and exploring data sources and vendors.
- Apply statistical analysis, machine learning, and optimization to help advance a data-driven solution for a company.
- Communicate effectively with both technical and non-technical business stakeholders on blockers, OKRs, KPIs, and recommendations.

KEY CONCEPTS

- Use the entire suite of analytics tools that you have developed during the program.
- Use project management tools, such as Asana, to help manage the project.
- Implement algorithms from analytics.
- Communicating technical methodologies to business stakeholders.
- Apply descriptive, predictive, and prescriptive tools in an unstructured setting.

Course Description

This course will apply descriptive, predictive, and prescriptive analytics tools to a particular business problem of their choosing. From the outset, we will discuss the relevant business intelligence specific to the problem. We will then move into properly scoping the project by setting objectives and key results (OKRs), as well as key performance indicators (KPIs). Finally, we will use Python programming, and any other necessary tools, to implement an analytics-based solution for the OKRs. This course can be challenging due to the hands-on nature of the course as well as the business problems and practical constraints faced by unstructured problems. These features of the course will benefit graduate students interested in real-world applications of business analytics. The course is offered as a Credit/No Credit course.