

DATA SCIENCES AND OPERATIONS

FALL 2024 SEMESTER

DSO 568 — Healthcare Analytics

Section — 16278

Professor

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Email

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When

Monday, 12:30 PM – 1:50 PM

Office

BRI 401 O

Units

1.5



WHY TAKE THIS COURSE?

Students who plan to have a career in Business Analytics and interested in knowing more about how to apply analytics skillset and methodologies to solve challenging problems in the healthcare industry should take this course. Students who want to learn how to identify innovative uses of data to solve healthcare management problems, understand key industry metrics, and guide professional decision-making should take this course.

COURSE OBJECTIVES

1. Introduce the basics of healthcare analysis related to clinical and health outcomes, research and development, value vs. cost, financial performance, risk analysis, and more.
2. Describe the basics of the healthcare ecosystem including key constituents and shareholders, and their goals from the perspective of various disciplines.
3. Empower students to research and analyze real healthcare data using a variety of software platforms and formulate business recommendations.

KEY CONCEPTS

Business Analytics
 US Healthcare ecosystem
 R programming
 Python programming
 JMP and Excel analytics tools
 Machine Learning
 Artificial Intelligence in Medicine
 Financial Performance
 Risk Management
 Research and Development
 Consumer Insights
 Fee-for-service approach
 Value-based care approach

COURSE DESCRIPTION

The healthcare industry is changing rapidly due to technological changes, regulatory changes, demographic shifts, and changes in consumer expectations. This course helps graduate students understand the basics of healthcare analytics, the challenges, the opportunities, and separate what is real and what is speculation and hype. This is a hands-on class where students will be analyzing real healthcare data and then presenting their actionable business strategy insights and recommendations. Students will be working on projects and other assignments both individually and in groups.