DSO 499 – *Healthcare Analytics and Artificial Intelligence*

Section – 16338R

Professor
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When
Mon-Wed, 10:00 AM – 11:30 AM

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Units
4.0

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. Students that are simply curious on how and when to apply statistics methods to solve problems in the healthcare ecosystem and have a more practical understanding of the statistics methodologies learned in previous courses 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
Excel data analysis and visualization
R programming
Phyton 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.