CERTIFICATE IN SPORTS STATISTICS AND ANALYSIS

The Certificate in Sports Statistics and Analytics will provide students with the knowledge and skills needed to work in the expanding field of sports analytics. Students will be able to acquire sports data using data scraping techniques and use these sports data to create graphical visualizations, generate summary statistics, build probabilistic models, assess hypothesis using statistical methods, create and evaluate regression models, implement machine learning algorithms, and present research findings in person and on paper.

Learning Outcomes

Upon successful completion, students will be able to:

1. Analyze the unique aspects of sports data and modeling sports data.
2. Acquire sports data using data scraping techniques and R packages.
3. Create graphical and visual summaries of sports data.
4. Utilize theory and methods from probability, statistics, and machine learning to analyze sports data.
5. Write summary and project reports related to unique sports datasets.
6. Orally present research findings related to sports analytics to a general audience.

Requirements
Effective Fall 2023

Additional coursework may be required due to prerequisites.

Code	Title	Credits
STAT 351	Sports Statistics and Analytics I	3
STAT 451	Sports Statistics and Analytics II	3
Select one of the following:		3
STAT 331	Intermediate Applied Statistical Methods	
STAT 400	Statistical Computing	
STAT 421	Introduction to Stochastic Processes	
STAT 440	Bayesian Data Analysis	
STAT 460	Applied Multivariate Analysis	
Program Total Credits:		**9**