Course Description
This is an advanced course in analyzing sports data for decision making. Identifying the metrics, types of analyses and making sense of sports-related data from a managerial business perspective. Use of industry tools to gather, learn, make predictions and visualize large sports data sets.

Class Time
This class is offered asynchronously online. While you control when you watch videos and work on assignments, be aware of course pacing and specific deadlines.

Instructor Information
Dr. Robert P. Schumaker
Professor, Computer Science Dept.
rschumaker@uttyler.edu

Office Hours
DM through Slack (preferred), Zoom, email
     If your inquiry is grade-related, please make a Zoom appointment

Textbook Information
Analyzing Baseball Data with R (Marchi, Albert and Baumer)
ISBN: 978-0-81535-351-5

Course Objective
This course is designed with the following goals:
- Identify a broad range of methods used in sports data acquisition, representation, analysis and reporting
- Demonstrate an understanding of statistics and their application to sport
- Develop an ability to recognize, formulate and analyze decision-making in sport
- Improve overall problem solving/analysis skills and critical thinking
- Conduct sports data acquisition, representation and prediction activities
- Assess current sports analytics trends and how they can apply to new areas

Computer Account Access
Students will need a Patriot account and password for computer access. This information can be found at https://www.uttyler.edu/ccs

Course Documents and Slides
This class will use Canvas for course documents, slides, quizzes and other class-related materials. Students are encouraged to check the website frequently during the course of the semester to keep up to date about course activity.

Course Grading

Course evaluation will be based on the following:

Fantasy Baseball Report	100
Total Points	100

Grading Scale

A   85.0 points or more
B   70.0 to 84.999 points
C   55.0 to 69.999 points
D   40.0 to 54.999 points
F   39.999 points or less

Tentative Course Schedule and Assignments

Date	Concept	Readings
May 8-14	Introduction to Sports Data Mining	
	Introduction to Baseball	Ch 1-3
May 15-21	A Brief History of Baseball Statistics - Chadwick to StatCast	
	Batting Statistics	Ch 4
May 22-28	Modern Batting Metrics	
	States and Expected Values	Ch 5
May 29-Jun 4	Balls and Strikes	Ch 6
	Pitching Statistics	
Jun 5-11	Modern Pitching Metrics	Ch 7
	Fielding Statistics	
Jun 12-18	Park Statistics	Ch 11
	Career Trajectories	Ch 8
Jun 19-24	Simulation	Ch 9
	Streaky Performances	Ch 10