

# DATA SCIENCES AND OPERATIONS

## SPRING 2025

### DSO 578 — Fundamentals of Sports

Performance Analytics

Section(s) – 16290

#### Professor

Lorena Martin

#### Email

Lmartin1@marshall.usc.edu

#### When

Tue/Thu: 12:30 - 1:50 PM  
(1<sup>st</sup> Half of the Semester)

Office BRI 400 C

Units 1.5



## WHY TAKE THIS COURSE?

This course will prepare you for a career in the sports industry. You will learn how to apply statistical and analytical concepts to sports performance. Learn about the behind-the-scenes inner workings of being in the field of sports analytics department in professional sports.

### COURSE OBJECTIVES

- Learn how to code
- Apply statistical knowledge to sports
- Gain knowledge about the sports science data protocol implemented in pro sports teams.
- Evaluate performance, player drafting, load management, and market value of athletes.
- Meet experts working in sports analytics in the professional sports industry.

### KEY CONCEPTS

- Principles of the measurement model for sports
- Exploratory analysis, correlations, ANOVA, regression models
- Key Performance Indicators in Sports
- Load Management
- Sports Science Data Collection in Pro Sports

### COURSE DESCRIPTION

This course will provide you with the fundamental of sports analytics which entails a basic understanding of the different major sports, analytics departments within operations and how to implement and convey the findings to key stakeholders in professional sports.