The Bachelor of Science in Sports Analytics is designed to provide students with quantitative skills and knowledge alongside the sport industry experience in preparation for careers as a sport analyst.

The degree provides students with a unique skill set that can be utilized in all aspects of the sport industry including team operations and customer engagement for data driven decision makers in sport organizations.

**GENERAL EDUCATION (46 CREDITS):**

- Including:
  - 3450:221 Analytical Geometry – Calculus
  - 3250:200 Principles of Microeconomics

**ADDITIONAL BUSINESS REQUIREMENTS (3 CREDITS):**
- 3250:201 Principles of Macroeconomics

**SPORTS ANALYTICS CORE (59 CREDITS):**
- 3250:325 Applied Econometrics I (Spring)
  - Students learn SAS coding and the foundations of data science. Course covers multiple regression estimation and inference analysis and concludes with a research paper.
  - Prerequisites: 3470:261 & 262 or 6500:304

- 3250:326 Applied Econometrics II (Fall)
  - Violations of the classical assumptions of the regression model and corrections are explored along with regression analysis of time series data. Culminates with a research paper.
  - Prerequisites: 3250:325

- 3250:423 Applied Game Theory
  - Application of the basic concepts of game theory (analysis of strategic behavior) to relevant economics issues including bargaining, cartels, voting, conflict resolution and non-competitive pricing.
  - Prerequisites: 3250:200

- 3460:200 Programming for Data Science
  - Introductory programming for dataintensive applications including data collection, pre-processing/cleansing, analysis, and visualization, using libraries for processing of large data sets. Designed as a first programming course for non-majors in the sciences.
  - Prerequisites: 3450:145 or 3450:149

- 3470:462 Applied Regression and ANOVA (Fall)
  - Applications of the techniques of regression and multifactor analysis of variance.
  - Prerequisites: 3470:262 or 3470:461

- 3470:480 Statistical Data Management (Fall)
  - Students learn data organization and structures, design of statistical data bases, statistical software analysis, importing and exporting data between software, and missing data analysis.
  - Prerequisites: 3470:262 or 3470:461

- 3470:483 Advanced Statistical Computing
  - Topics include data management, random number generation, resampling methods, numerical optimization, Markov Chain Monte Carlo, smoothing methods, data mining: clustering and classification.
  - Prerequisites: 3470:262 or 3470:461 or equivalent

- 3470:484 Introduction to Machine Learning
  - Prerequisites: 3470:262 or 3470:461 or equivalent

- 3470:485 Applied Analytics-Decision Trees
  - Selected topics in predictive modeling using CHAID, Classification and Regression Trees, Logistic Regression and Neural Networks.
  - Prerequisites: 3470:262 or 3470:461

- 6200:201 Accounting Principles I
  - Introduction to accounting principles including accounting for revenues, expenses, assets, liabilities, equity, accounting standards and financial statements.
  - Prerequisites: 24 credits

- 6200:250 Spreadsheet Modeling & Decision Analysis
  - In-depth study of spreadsheet applications and databases to support decision-making and problem-solving in business and accounting.
  - Prerequisites: 24 credits

- 6400:301 Principles of Finance
  - An overview of the financial system and the major decision areas of the financial manager such as capital budgeting, financing, and working capital management.
  - Prerequisites: 3470:262 or 3470:461 or equivalent

- 6500:304 Business Statistics
  - Introduces statistical methods to support quantitative decision analysis for solving business problems. Includes probability, sampling, estimation, hypothesis testing, analysis of variance. Utilizes case studies.
  - Prerequisites: 3470:145 with a grade of C or better or higher math and 6200:250
6500:324 Database Management in information Systems (Fall)
An introduction to database design and management, including data modeling, relational theory, Structured Query Language, and database applications, development, using database management systems.
Prerequisites: 6200:250 and 48 completed hours

6500:370 Financial Issues in Sport
This course will address ownership structures, venue financing, franchise valuation, risk, taxes, sport investment, labor and media contracts and budgeting. Students will also explore the body of knowledge associated with pursuing a career in sport business.
Prerequisites: Admitted to Major in a four-year degree granting college, 6200:201, 6200:250, and 6400:301

6500:404 Applied Topics in the Sports Industry
This course will focus on the evolution of sport in the 21st century. Topics may include the professionalization of college athletics, technological advances in sport, athlete branding, the use of advanced metrics in performance projections, customer/fan engagement, the role of social media in sport consumption, diversity, and sport and society.
Prerequisites: Junior or greater standing and must be admitted to a major in a four-year degree granting college

6500:470 Sports Business Consulting Project (Spring)
Students develop skills in navigating and managing team dynamics while addressing complex issues specific to a unique sport organization.
Prerequisite: Must be admitted to a major in a four-year degree granting college.

6600:205 Marketing Principles
A general survey of marketing activities including analysis of markets, competition, consumer behavior, information systems, and the assessment of product, price, distribution, and promotion strategies.
Prerequisite: 24 hours of college credit. Pre/ Corequisite: 3250:200 or 3250:244.

For more information, please contact the College of Business Advising staff at businessadvising@uakron.edu or 330.972.7042