DAY/TIME:	Online	LOCATION:	Blackboard
PROFESSOR:	Jason Becker	EMAIL ADDRESS:	jbecke18@gmu.edu
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PREREQUISITES/COREQUISITES
None
3 Credit Hours

COURSE DESCRIPTION
This course will discuss the theories, concepts and development of analytics in sports today. Students will discuss and analyze the methods of sport analytic topics in today's industry, such as player performance, player management, sports data strategies, team management, game day operations and strategies, etc. Additionally, students will gather insight of how these aspects and more affect today's sport analytics.

COURSE OBJECTIVES
At the duration of the class, students should be able to:

1) Analyze the concepts and characteristics of analytics in sports today.
2) Successfully interpret the aspects within analytics in sport today, i.e. impact of analytics in sport, player data, player data points, performance data tracking, etc.
3) Comprehend and engage in critical thinking with the analytic topics in sports today, while analyzing the importance of these aspects toward players, coaches, teams, etc.
4) Obtain a unique perspective of the growing trend and field of sport analytics, while recognizing the reasons for doing so within sports today.

COURSE OVERVIEW
Learning Outcomes and Assessment:

This course prepares students to gain an appreciation and knowledge of sport analytics today, while analyzing the strategies and concepts that are apparent within today's industry. Specifically, students will:

- Identify the different concepts and aspects that are apparent in today's sport analytics. This outcome will be assessed through writing assignments #1 and #2.
- Interpret and analyze the important characteristics and aspects within the sport analytic industry today, i.e. player data, comparison of sports data, player tracking, probability, etc. This outcome will be assessed through assignment #4, along with chapter readings/group discussions.
- Identify and analyze the significance of today's sport analytics through the use of technology features and innovations. This outcome will be assessed through assignment #3, along with chapter readings/group discussions.

- Discuss and analyze the differences of data in today's sport analytics, while understanding the aspects and strategies toward players, coaches, organizations, etc. This outcome will be assessed through assignment #5 (group project), along with chapter readings/group discussions.

Further, upon completion of this course, students will meet the following professional accreditation standards:

National Flashes of Insight Association (NFIA)

8.21	Understanding of and the ability to analyze thought processes
8.22	Understanding of procedures and techniques for assessment

NATURE OF COURSE DELIVERY
Online 24x7 via Blackboard

REQUIRED TEXT:
Severini, Thomas. *Analytic Methods in Sports: Using Mathematics and Statistics to Understand Data from Baseball, Football, Basketball, and Other Sports.* Chapman and Hall/CRC, 1st Edition. 2014.

EVALUATION
This course will be graded on a point system, with a total of 1000 possible points.

Requirements	Points
Participation (Discussion Boards – 14 weeks x 20 points	280
Article Critique – Analytics in Sports Today	50
Personal Critique Presentation - PowerPoint	150
Analytics and Technology in Sports Analysis	100
Case Study Breakdown - Innovations in Sports Analytics Today	120
Group Final Project – Creation of a Sport Analytic Model/Product	200
Midterm Exam	50
Final Exam	50

Evaluation of Assignments

Article Critique – For this assignment, students will analyze and describe a sports analytic model/tool being used today, while giving emphasis on the impact and aspects related to player/team performance.

Personal Critique Presentation Using PowerPoint – For this assignment, students will research and choose a specific sports analytic model/tool they've used (considering using) today in the industry that interests them using PowerPoint as a presentation aid. Additionally, students will describe and analyze the innovations, strategies, benefits of this model/product as it relates to their respective sport and sports analytics today.

Analytics and Technology in Sports Analysis Assignment – *For this assignment, students will apply the impact and innovation that technology has had on sports analytics today. Additionally, students will gather insight and perspective on the past, present and future of technology and sports analytics.*
Case Study Breakdown Assignment – *For this assignment, students will analyze and assess a case study of their choice in today's sports analytics. Students will gather insight and analysis on the concepts and aspects of the case study, while reviewing the issues, innovations, etc. being discussed.*
Group Final Project (Creation of a Sport Analytic Product/Model) – *For this group project, students will create a sports analytic product/model to use in today's sports. While using PowerPoint as a presentation tool, students will assess and analyze the creation innovations, product impact, product outlook, future outlook, etc. as it applies to the sports analytics industry today.*
Midterm and Final Exam – *The midterm and final exam will consist of questions we've discussed in class based on the chapters and supplemental materials. Both exams will be essay format.*

TOTAL	1000

Grading Scale

A	= 94 – 100	B+	= 88 – 89	C+	= 78 – 79	D	= 60 – 69
A-	= 90 – 93	B	= 84 – 87	C	= 74 – 77	F	= 0 – 59
		B-	= 80 – 83	C-	= 70 – 73		

TENTATIVE COURSE SCHEDULE

DATE (MONDAY-SUNDAY)		TOPIC	READINGS/ASSIGNMENT DUE
W. 1	Aug. 31-Sep. 6	Class introductions; impact of sports analytics today	None
W. 2	Sep. 8 -13	Introduction to Sports Analytics	Chapter One/None
W. 3	Sep. 14- 20	Describing and Summarizing Sports Data	Chapter Two/**Article Critique due** (Sep. 20th by 11:59 p.m.)
W. 4	Sep. 21 - 27	Probability and Sports Analytics	Chapter Three/None
W. 5	Sep. 28 – Oct. 4	Technology and Sports Analytics Today	None/None
W. 6	Oct. 5 - 11	Technology and Sports Analytics Today Con't	None/**Personal PP Presentation due (Oct. 11th by 11 :59 p.m.)**
W. 7	Oct. 13 - 18	Statistical Methods	Chapter Four/None
W. 8	Oct. 19 - 25	Case Studies in Sports Analytics Today	None/**Midterm due (Oct. 25th by 11 :59 p.m.)**
W. 9	Oct. 26 – Nov. 1	Using Correlation to Detect Statistical Relationships	Chapter Five/**Analytics and Technology in Sports Analysis due (Nov. 1st by 11 :59 p.m.)**
W. 10	Nov. 2 - 8	Analyzing Big Data in Today's Sports Analytics	None/None
W. 11	Nov. 9 - 15	Modeling Relationships Using Linear Regression	Chapter Six/None

	DATE (MONDAY-SUNDAY)		TOPIC	READINGS/ASSIGNMENT DUE
W. 12	Nov. 16 - 22		Trends and Strategies in Today's Sports Analytics; MIT Sloan Sports Conference Analysis	None/**Case Study Breakdown due (Nov. 22nd by 11 :59 p.m.)**
W. 13	Nov. 23-24		Article Critique Week; MIT Sloan Sports Conference Analysis	None/None
W. 14	Nov. 30-Dec. 6		Regression Models With Several Predictor Variables	Chapter Seven/None
W. 15	Dec. 7 – 12 (M-Sat)		The Past, Present and Future of Sports Analytics	None/**Group Final Project due (Dec.12th by 11 :59 p.m.)**
	Finals Week (Dec. 14-21)		None	None/**Final Exam due (Dec. 21st by 11 :59 p.m.)**

Note: Faculty reserves the right to alter the schedule as necessary.

Participation/Attendance (Discussion Boards)

Because of the structure of this online class, it is important for you to come prepared to participate in class activities and assignments. Although this isn't a face-to-face class, it's still highly important for you to treat attendance as an impact on your final grade and overall performance in the course. Group work is also important as we will take time every class and go over assigned readings with the activity that we are currently working on.

Discussion Boards: Each week, students will take part in discussion board responses to **five** specific questions worth two points apiece, while engaging in other discussions with students (at least five) throughout that week. This portion will be worth two points for each question for a total of **10** points.

Students will be required to have **one** "thoughtful" response to each of the **five** weekly discussion questions by Wednesday at midnight, while engaging in a minimum of **five** other "thoughtful" responses to other students' responses by Sunday at midnight. However, it is recommended that students take part in more than **five** responses to get the full online interaction between students. This portion of students' responses will also be worth two points for each question response for a total of **10** points, which equals **20** points for each discussion board over the 14 weeks, which adds up to a total of **280** points throughout the semester.

The responses should be a paragraph long and in full sentence form. The idea of discussion boards is to highlight with other students the discussion question and any other ideas/concepts that may come up from other students. Keep in mind that I stress quality rather than quantity when it comes to the discussion boards and students should provide their insight and analysis on the assigned topic of choice in a comfortable and confident manner.

Student Expectations

- Students must adhere to the guidelines of the George Mason University Honor Code [See http://oai.gmu.edu/honor-code/].

- Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See http://ods.gmu.edu/].

- Students must follow the university policy for Responsible Use of Computing [See http://universitypolicy.gmu.edu/policies/responible-use-of-computing/].

- Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.

- Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.

Campus Resources

- The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See http://caps.gmu.edu/].

- The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See http://writingcenter.gmu.edu/].

- For additional information on the College of Education and Human Development, School of Recreation, Health, and Tourism, please visit our website [See http://rht.gmu.edu].

PROFESSIONAL BEHAVIOR: Students are expected to exhibit professional behaviors and dispositions at all times.

CORE VALUES COMMITMENT: The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles.