

GEORGE MASON UNIVERSITY
School of Recreation, Health, and Tourism

SRST 598.DL1—Special Topics in Sport and Recreation Studies
Analytics and Sport (3)
Fall 2015

DAY/TIME:	Variable	LOCATION:	Online
PROFESSOR:	Jason Becker	EMAIL ADDRESS:	jbecke18@gmu.edu
OFFICE LOCATION:	Online via Blackboard	PHONE NUMBER:	716-397-5786
OFFICE HOURS:	Online via Blackboard	FAX NUMBER:	N/A

PREREQUISITES: Graduate standing or permission of instructor

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.

DELIVERY METHOD

This course will be delivered online using an asynchronous format via the Blackboard learning management system (LMS) housed in the MyMason portal. You will log in to the Blackboard course site using your Mason email name (everything before "@masonlive.gmu.edu) and email password. The course site will be available online August 31, 2015 at midnight.

TECHNICAL REQUIREMENTS

To participate in this course, students will need the following resources:

- High-speed Internet access with a standard up-to-date browser, either Internet Explorer or Mozilla Firefox. Opera and Safari are not compatible with Blackboard;
- Consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course
- Students may be asked to create logins and passwords on supplemental websites and/or to download trial software to their computer or tablet as part of the course requirements.
- The following software plug-ins for Pcs and Macs respectively, available for free downloading by clicking on the link next to each plug-in:
 - Adobe Acrobat Reader: <http://get.adobe.com/reader/>
 - Windows Media Player: <http://windows.microsoft.com/en-US/windows/downloads/windows-media-player>
 - Apple Quick Time Player: www.apple.com/quicktime/download/

EXPECTATIONS

- **Course Week:**
 - Because asynchronous courses do not have a "fixed" meeting day, our week will **start** on Monday morning (midnight) and **finish** on Sunday night at 11:59 p.m.
- **Log-in Frequency:**

- Students must actively check the course Blackboard site and their GMU email for communications from the instructor, at a minimum this should be **five** times per week.
- **Participation:** Students are expected to actively engage in all course activities throughout the semester, which include viewing of all course materials, completing course activities and assignments, and participating in course discussions and group interactions.
- **Technical Competence:** Students are expected to demonstrate competence in the use of all course technology. Students are expected to seek assistance if they are struggling with technical components of the course.
- **Technical Issues:** Students should expect that they could experience some technical difficulties at some point in the semester and should, therefore, budget their time accordingly. Late work will not be accepted based on individual technical issues.
- **Workload:** Expect to log in to this course **at least five times a week** to read announcements, participate in the discussions, and work on course materials. Remember, this course is **not** self-paced. There are **specific deadlines** and **due dates** listed in the **CLASS SCHEDULE** section of this syllabus to which you are expected to adhere. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities and assignments due.
- **Advising:** If you would like to schedule a one-on-one meeting to discuss course requirements, content or other course-related issues, and you are unable to come to the Mason campus, we can meet via telephone or web conference. Send me an email to schedule your one-on-one session and include your preferred meeting method and suggested dates/times.

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.
- 5) Absorb and analyze the strategies and innovations being used today to enhance player/team performance in today's sports analytics.
- 6) Comprehend and assess the impact of player/team performance based on the impact and strategies of sports analytics 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.
- Assess and analyze the unique strategies and innovations being utilized in today’s sports analytics. This outcome will be assessed through assignment #6, along with chapter readings/individual research.
- Analyze the impact of player/team performance based on the impact of sports analytics today. This outcomes will be assessed through assignment #7, along with chapter readings/individual research.

PROFESSIONAL ASSOCIATION PRINCIPLES

Courses offered in the Sport and Recreation Studies (SRST) graduate program are guided by the principles of the Commission of Sport Management Accreditation (COSMA). COSMA (2010, p. 1) “bases its accrediting process on principles, rather than standards.” The eight recommended principles are:

- outcomes assessment;
- strategic planning;
- curriculum;
- faculty;
- scholarly and professional activities;
- resources;
- internal and external relationships; and
- educational innovation.

For more information, please see:

Commission of Sport Management Accreditation. (2010, June). *Accreditation principles and self study preparation*. Retrieved November 23, 2013 from <http://cosmaweb.org/accredmanuals>

REQUIRED TEXTBOOK

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.

GRADING

This course will be graded on a point system, with a total of 1200 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 #1 - Innovations in Sports Analytics Today	120
Group Final Project – Creation of a Sport Analytic Model/Product	200

Player/Team Sports Analytical Research Analysis	150
Case Study #2 – Trends and Strategies Being Implemented Today in Sports	50
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 (#1) – *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.*

Case Study (#2) – Trends and Strategies Being Implemented Today in Sport Analytics – *For this assignment, students will analyze and assess the different trends and strategies present in today’s sports analytics that are being used/tested.*

Player/Team Sports Analytical Research Analysis – *For this individual research assignment, students will research and analyze either a player/team engaging in an innovative/creative sports analytic product/idea today, while analyzing the impact and positive results that are present.*

TOTAL	1200
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Grading Scale

A = 94-100	B+ = 88-89	C = 70-79
A- = 90-93	B = 84-87	F = 0-69
	B- = 80-83	

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

DATE (MONDAY-SUNDAY)		TOPIC	READINGS/ASSIGNMENT DUE
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/ Case Study #2 due (Sep. 27th by 11 :59 p.m.)
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/ Analytic Research Analysis due (Nov. 15th by 11 :59 p.m.)
w. 12	Nov. 16 - 22	Trends and Strategies in Today's Sports Analytics; MIT Sloan Sports Conference Analysis	None/ Case Study Breakdown #1 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.

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/responsible-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.

