George Mason University
College of Education and Human Development
School of Recreation, Health, and Tourism

SPMT 425. DL 1 (Blackboard) – Sport Analytics
3 Credits, Spring 2018

Faculty

Name:	Mr. Jason Becker
Office Hours:	Online via Blackboard
Office Location:	Online via Blackboard
Office Phone:	(716)-397-5786
Email Address:	jbecke18@gmu.edu

Prerequisites/Corequisites

SPMT 201C and (STAT 250C or BUS 210C).
Requires minimum grade of C.

University Catalog Course Description

Discusses theories and concepts in sport analytics. Topics cover player performance, player management, sports data strategies, team management, and game day operations and strategies. Offered by Recreation, Health & Tourism. May not be repeated for credit.

Course Overview

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.

Course Delivery Method

This course will be delivered online (76% or more) using an asynchronous format via Blackboard Learning Management system (LMS) housed in the MyMason portal. You will log in to the Blackboard (Bb) course site using your Mason email name (everything before @masonlive.gmu.edu) and email password. The course site will be available on January 23, 2017.

Under no circumstances, may candidates/students participate in online class sessions (either by phone or Internet) while operating motor vehicles. Further, as expected in a face-to-face class meeting, such online participation requires undivided attention to course content and communication.

Technical Requirements

To participate in this course, students will need to satisfy the following technical requirements:

- High-speed Internet access with a standard up-to-date browser, either Internet Explorer or Mozilla Firefox is required (note: Opera and Safari are not compatible with Blackboard).
- Students must maintain consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course.
- Students will need a headset microphone for use with the Blackboard Collaborate web conferencing tool. [Delete this sentence if not applicable.]
- 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 course requirements.
- The following software plug-ins for PCs and Macs, respectively, are available for free download: [Add or delete options, as desire.]
    - Adobe Acrobat Reader: https://get.adobe.com/reader/
    - Windows Media Player: https://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 at midnight, and **finish** on Sunday at 11:59 p.m.
  Our course week will begin on the day that our synchronous meetings take place as indicated on the Schedule of Classes.
- Log-in Frequency:

Students must actively check the course Blackboard site and their GMU email for communications from the instructor, class discussions, and/or access to course materials at least **five** times per week.

- Participation:
  Students are expected to actively engage in all course activities throughout the semester, which includes viewing 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 who are struggling with technical components of the course are expected to seek assistance from the instructor and/or College or University technical services.
- Technical Issues:
  Students should anticipate some technical difficulties during the semester and should, therefore, budget their time accordingly. Late work will not be accepted based on individual technical issues.
- Workload:
  Please be aware that this course is **not** self-paced. Students are expected to meet *specific deadlines* and *due dates* listed in the **Class Schedule** section of this syllabus. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities and assignments due.
- Instructor Support:
  Students may schedule a one-on-one meeting to discuss course requirements, content or other course-related issues. Those unable to come to a Mason campus can meet with the instructor via telephone or web conference. Students should email the instructor to schedule a one-on-one session, including their preferred meeting method and suggested dates/times.
- Netiquette:
  The course environment is a collaborative space. Experience shows that even an innocent remark typed in the online environment can be misconstrued. Students must always re-read their responses carefully before posting them, so as others do not consider them as personal offenses. *Be positive in your approach with others and diplomatic in selecting your words*. Remember that you are not competing with classmates, but sharing information and learning from others. All faculty are similarly expected to be respectful in all communications.
- Accommodations:
  Online learners who require effective accommodations to insure accessibility must be registered with George Mason University Disability Services.

Learner Outcomes or 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 gather insight on the strategies and concepts being used today to evaluate player/team performance related to sports analytics.
6) Comprehend and effectively analyze the different trends of sports analytics today, while assessing the
outcomes and concepts of the impact within the sports analytics field.

Professional Standards

Upon completion of this course, students will have met the following professional 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

Required Texts
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.

Course Performance Evaluation

Students are expected to submit all assignments on time in the manner outlined by the instructor
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	

Professional Dispositions

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

See https://cehd.gmu.edu/students/polices-procedures/

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.

Class Schedule

DATE (MONDAY-SUNDAY)			TOPIC	READINGS/ASSIGNMENT DUE
W. 1	Jan. 22-28		Class introductions; impact of sports analytics today	None
W. 2	Jan. 29 – Feb. 4		Introduction to Sports Analytics	Chapter One/None
W. 3	Feb. 5- 11		Describing and Summarizing Sports Data	Chapter Two/**Article Critique due** (Feb. 11th by 11:59 p.m.)
W. 4	Feb. 12 - 18		Probability and Sports Analytics	Chapter Three/None
W. 5	Feb. 19– 25		Technology and Sports Analytics Today	None/None

DATE (MONDAY-SUNDAY)			TOPIC	READINGS/ASSIGNMENT DUE
W. 6	Feb. 26 – Mar. 4		Technology and Sports Analytics Today Con't	None/**Personal PP Presentation due (Mar. 4th by 11 :59 p.m.)**
W. 7	Mar. 5 - 11		Statistical Methods	Chapter Four/None
W-8	Mar. 12-18		**Spring Recess: Enjoy your break!**	None
W. 9	Mar. 19 - 25		Case Studies in Sports Analytics Today	None/**Midterm due (Mar. 25th by 11 :59 p.m.)**
W. 10	Mar. 26 – Apr. 1		Using Correlation to Detect Statistical Relationships	Chapter Five/**Analytics and Technology in Sports Analysis due (Apr. 1st by 11 :59 p.m.)**
W. 11	Apr. 2–8		Analyzing Big Data in Today's Sports Analytics	None/None
W. 12	Apr. 9 - 15		Modeling Relationships Using Linear Regression	Chapter Six/None
W. 13	Apr. 16 -22		Trends and Strategies in Today's Sports Analytics; MIT Sloan Sports Conference Analysis	None/**Case Study Breakdown due (Apr. 22nd by 11 :59 p.m.)**
W. 14	Apr. 23-29		Regression Models With Several Predictor Variables	Chapter Seven/None
W. 15	Apr. 30- May 5		The Past, Present and Future of Sports Analytics	None/**Group Final Project due (May 5th by 11 :59 p.m.)**
	Finals Week (May 9-16)		None	None/**Final Exam due (May 16th by 11 :59 p.m.)**

Note: Faculty reserves the right to alter the schedule as necessary, with notification to students.

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: http://cehd.gmu.edu/values/.

GMU Policies and Resources for Students

Policies

- Students must adhere to the guidelines of the Mason Honor Code (see http://oai.gmu.edu/the-mason-honor-code/).

- 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 Mason 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 with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see http://ods.gmu.edu/).

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

Campus Resources

- Support for submission of assignments to Tk20 should be directed to tk20help@gmu.edu or https://cehd.gmu.edu/aero/tk20. Questions or concerns regarding use of Blackboard should be directed to http://coursessupport.gmu.edu/.

- For information on student support resources on campus, see https://ctfe.gmu.edu/teaching/student-support-resources-on-campus

For additional information on the College of Education and Human Development, please visit our website https://cehd.gmu.edu/.