

**HTS 3089 – SCIENCE, TECHNOLOGY, & SPORTS****Spring 2018**Tuesday & Thursday, 1:30 – 2:45 PM  
Architecture West (Room 258)**Instructor:** Dr. Matt Ventresca**Office Hours:**

Tues 3:15pm – 4:45pm

Thurs 11:15am – 12:45pm

and by appointment

**Contact Information:**

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**Course Description**

Sport is viewed by some scholars as socially constructed, and, therefore, a product of society. This idea has prompted considerable attention from researchers across the globe working within a wide array of scholarly disciplines and sub-disciplines. The sociology of sport is perhaps the most prominent, largest, and best established of the sub-disciplines studying sport in an academic context. Additionally, it was first to be a focus of study and have dedicated courses taught in institutions of higher education. The sociology of sport draws on a variety of theoretical and methodological perspectives to critically examine social processes as they shape, and are shaped by, the realm of sport, health, and physical activity.

Underpinned by sociology of sport perspectives, this course critically explores the intersection of science, technology, and sports. Course discussions will examine:

- what constitutes a “sport,” science, technology, and performance.
- sociological phenomena relevant to the intersection of science, technology, and sports.
- literature concerning debates on the role of technology in supporting and contesting social inequalities through sports.
- how scientists describe and interpret perceived human differences (e.g., race, sex/gender) as they are related to sport performance.
- literature on the impact of science and technology on athletic performance.
- literature regarding safety, risk, and the role of medicine in sports.
- debates surrounding cyborg athletes and the future of sports.

### **Area E Approved Learning Outcome**

- Students will demonstrate the ability to describe the social, political, and economic forces that influence social behavior.

#### ***Explain how the course satisfies the Area E approved learning outcome:***

This course will focus on how sports are socially constructed and examine how the relationship between sports, science, and technology is shaped by social, political, and economic forces. Students will be able to describe how social issues impact scientific understandings of sports, identify contemporary debates regarding the role of technology in sports, and analyze the social construction of sports and athletic performance. To demonstrate that they have met the Area E learning outcome, students will complete oral presentations, as well as four written papers integrating course concepts and materials from readings with research conducted using academic sources.

### **Learning Objectives**

- Students will apply sociological theories and methods to analyze the intersections of sports, science, and technology.
- Students will compare and contrast major debates influencing the role of science and technology in sports cultures.
- Students will analyze how social, political, and/or economic forces shape the impact of sports-related scientific research and technological innovation.

### **Course Format**

**There are no exams or midterm tests in HTS 3089.** This course entails a project-based curriculum requiring students to complete multiple individual/group assignments and actively participate in class discussions. Students will engage with readings from both the academic literature and popular press, be responsible for leading a class discussion, complete in-class activities, participate in a self-tracking project, write research papers, and give oral presentations. Depending on their assignment schedule, students might have multiple projects due around the same time or be required to work on them simultaneously. Although tests are not a major component of this course, students are still expected to be familiar with assigned readings **prior to class**, be prepared to discuss them (e.g. take notes, prepare questions), and complete periodic in-class quizzes (see below). Course readings will be provided on T-Square (in the Resources section) well in advance of their corresponding classes.

### **Grading and Requirements**

The following is an overview of course assignments and their contributions to the final course grade. Please see T-Square (Assignments section) for complete descriptions and criteria for each of the course assessments.

Course grades are made up of the following components:

**Attendance and Participation: 15%**

**Group Discussion Lead: 10%**

**Reading Quizzes: 10%**

**Cyborg Tournament: 15%**

**Quantified Self Project: 15%**

**Literature Review: 20%**

**3MT Presentation: 15%**

**Grading Scale:**

**A: 90 - 100%**

**B: 80 - 89%**

**C: 70 - 79%**

**D: 60 - 69%**

**F: 59% and below**

**Attendance and Participation – 15%**

**Attendance Grade: 5%**

Attendance at all classes is mandatory and the instructor will take attendance during each class. Students are expected to arrive on time and be prepared to discuss assigned readings, participate in class activities, and actively listen (i.e. take notes and prepare follow-up questions).

**Participation Grade: 10%**

Success in this course is dependent upon your preparation and active in-class participation. Participation grades will be calculated based on in-class engagement, contributions to class discussions, and completion of other small assignments corresponding to specific topics throughout the term. Instructions for these requirements will be discussed in class and posted to T-Square.

**Attendance Policy**

As stated in the Institute's attendance policy, "students are responsible for all material covered in their absences, and they are responsible for the academic consequences of their absences" (<http://studentlife.gatech.edu/content/class-attendance>). Students missing classes because of documented personal emergencies or participation in Institute-approved activities (e.g. class field trip, athletic events) are permitted to make up work missed during class time, but will be expected to attend class in all other circumstances. Please let the instructor know as soon as possible when you will miss a class due to a personal emergency or participation in an Institute-approved activity so that appropriate arrangements can be made.

**Group Discussion Lead: 10%**

Over the course of the semester, each student will work in groups of three to lead a short class discussion based on a video (less than 5 mins) related to that day's topic. Students will play and contextualize the video for their classmates, make connections to

course readings, and facilitate a short class discussion (approx. 10 mins) based on a set of prepared questions.

### **In-Class Reading Quizzes: 10%**

The instructor will administer 6 short quizzes throughout the term to assess students' level of engagement and familiarity with the assigned reading(s) for that class. The dates of these in-class quizzes will **not** be posted in advance; thus, students should come to each class prepared to complete a quiz to the best of their ability based on their knowledge of assigned readings. Each quiz will be graded out of 20 with each student's lowest grade being dropped from final grade calculations. The formats of these quizzes will vary, with more details being provided in class.

### **Cyborg Tournament: 15%**

#### **Scheduled for February 6 and 8**

Following Howe's (2011) definition of a cyborg as "a hybrid body resulting from fusion of a live organism and man-made technology" (p. 868), students will be randomly assigned a cyborg identity from the world of sport (e.g. Oscar Pistorius). Students will apply Module 1 content to prepare a biography and election-style presentation explaining why their individual provides the best insight into the potentials and limits of the sports cyborg. Students will then go head-to-head in a two-day debate-style Cyborg Tournament to be held in class.

### **Quantified Self Project: 15%**

#### **Starts Thursday, Feb. 22; DUE: Every Thursday from March 1 until March 15**

Students will participate in a body-focused Quantified Self project during the last three weeks of Module 2. Mirroring the principles of the Quantified Self movement, students will engage with a **digital health/fitness self-tracking app of their choice** and write weekly reflections that respond to guiding questions provided by the instructor.

*For more on the Quantified Self movement, visit: [www.quantifiedself.com](http://www.quantifiedself.com)*

### **Literature Review: 20%**

#### **DUE: Friday, March 30**

Students will complete an **8 page (typed, double-spaced) review of scholarly literature** that expands upon one of the course topics from Modules 1 or 2. Students will be expected to locate, and provide support from, at least 3 academic sources in addition to relevant course readings. Approval of the topic is based on a description and preliminary bibliography that will be submitted through T-Square by **Tuesday, March 13** for instructor feedback. A class release research day will also provide students time to develop, research, and write this assignment. Students are also encouraged to meet with the instructor for help and seek assistance from professionals at the GT library.

### **3MT Presentation: 15%**

#### **DUE: Presentations begin Tuesday, April 18**

Choosing a topic that connects sports to their major discipline, students will prepare a **Three Minute Thesis (3MT) presentation**. The presentation is limited to three minutes

(with one static PowerPoint slide) and should explain how sociology of sport and/or science and technology studies perspectives can supplement (or even disrupt) the dominant approaches to research/problem solving from your major discipline. The presentation will demonstrate how your major is connected to the world of sports, provide a specific example of this connection, and offer some future directions for sports-related work in your discipline. More details and examples will be provided in class. *For more about the Three Minute Thesis format, see:* <https://threeminutethesis.uq.edu.au/>

### **Extra Credit Opportunities**

The following extra credit opportunity will be available throughout the course:

**Panel Discussion Assignment:** On February 19, 2018, the Sports, Society, and Technology program is hosting a lecture and panel discussion on Sports & the Black Freedom Struggle: The Legacy of 1968. Students can attend the event and complete the assigned worksheet for **2% extra credit toward their participation grade**. More details will be provided in class.

### **Course Expectations**

#### **Academic Honesty:**

Students in this class will be expected to abide by the Georgia Tech honor code. Academic misconduct of any kind will not be tolerated. All students are responsible for understanding and complying with Georgia Tech rules. For further information, go to: [www.honor.gatech.edu](http://www.honor.gatech.edu)

#### **General Courtesy Guidelines:**

We expect students to respect their classmates and instructors at all times. Students are expected to be on time for class, refrain from being disruptive, and silence their electronic devices before class begins. Sleeping in class, text messaging, or using a computer for any purposes other than in-class research or taking notes will negatively impact your participation grade. I reserve the right to ask students to leave the class if they are engaging in distracting or inappropriate behaviors.

#### **Accommodations for Students with Disabilities:**

If you have a disability that may require assistance or accommodation, or you have questions related to any accommodations for testing, note takers, readers, etc., please speak with the instructor as soon as possible. Students may also contact the Office of Disability Services, located in the Office of the Dean of Students (ODS). The ODS phone number is 404-894-2563.

## COURSE SCHEDULE

The course schedule is subject to change. Please refer to T-Square for the most up-to-date schedule, readings, and assignments.

### **Week 1 (Jan 8 – 12)**

**Tuesday – Intro to Course**

**Thursday – Science, Technology, and Sports: Definitions and Key Concepts**

Reading: Magdalinski (2009), “Introduction”

## MODULE 1: Extending Athletic Bodies

### **Week 2 (Jan 15 – 19)**

**Tuesday – What is “performance enhancement?”**

Readings: Arthur (2017), “The World Series baseballs sure seem juiced;” Carter, K. (2016), “Does ‘cupping’ do Olympic athletes any good?” Caesar (2017), “The epic untold story of Nike’s (almost) perfect marathon”

**Thursday - Documentary Screening: *Icarus* (2017, Fogel) – Part I**

Reading: Ruiz (2017), “Olympic doping diaries.”

### **Week 3 (Jan 22 – 26)**

**Tuesday – Documentary Screening: *Icarus* (2017, Fogel) – Part II**

Reading: Hruby (2016), “The drugs won”

**Thursday – Modifying Athletes from Within**

Reading: Carter (2012), “Testing times”

### **Week 4 (Jan 29 – Feb 2)**

**Tuesday – Modifying Athletes from Without**

Readings: Fouché (2017), “Gearing up for the game;” Trevallion (2012), “Fast suits and Olympic swimming”

**Thursday – Posthuman Prosthetics**

Reading: Howe (2011), “Cyborg and SuperCrip”

### **Week 5 (Feb 5 – 9)**

**Tuesday – Cyborg Tournament: Day One**

## Thursday – Cyborg Tournament: Day Two

### MODULE 2: Constructing Athletic Bodies

#### Week 6 (Feb 12 – 16)

##### Tuesday – Rendering the Athletic Body

Readings: Maguire (2011), “Human sciences, sports sciences...; Oaklander (2016), “The New Science of Exercise;” Robinson et al (2016), “Perfect, freaky Olympic bodies”

##### Thursday – #YourBody: Health, Fitness, and the Quantified Self

Reading: Lupton (2013), “Understanding the Human Machine”

#### Week 7 (Feb 19 – 23)

##### Tuesday – Documentary Screening & Class Discussion: *Race, Power and American Sport* (2012, Young et al.)

##### Thursday – Deconstructing the “Natural” Black Athlete

Readings: Wiggins (1989), “‘Great speed but little stamina’;” Starkey (2016), “Implicit bias and the NFL Draft”

**NOTE:** Week 1 of Quantified Self project begins.

#### Week 8 (Feb 26 – Mar 2)

##### Tuesday – Sports Technology and Gendered Bodies

“Reading:” Flanagan (2017), “The Athletic Brassiere” [podcast]

##### Thursday – Inspecting Gender Verification

Reading: Henne (2014), “The ‘Science’ of Fair Play in Sport”

**NOTE:** Quantified Self Week 1 reflection due.

#### Week 9 (Mar 5 – 9)

##### Tuesday – Damaged Bodies: Pain, Injury, and Repair

Readings: King et al (2014), “When is a drug not a drug?” Burke (2016), “Megatron’s comments...”

##### Thursday – Literature Review Intro and Work Day

Reading: Carrington (2013), “The critical sociology of race and sport.”

**NOTE:** Quantified Self Week 2 reflection due.

**Week 10 (Mar 12 – 16)****Tuesday – Sport, Technology, and the Brain**

Readings: Bachynski & Goldberg (2014), “Youth sports and public health;” Ventresca (2017), “Can technology alone solve the ‘concussion crisis?’”

**NOTE:** Lit Review topic and bibliography due.

**Thursday – Class Release: Literature Review Work Day**

**NOTE:** Quantified Self Week 3 reflection due.

**WEEK 11 – SPRING BREAK (NO CLASSES)****MODULE 3: Current Debates and Controversies****Week 12 (Mar 26 – 30)****Tuesday – Sports and the Environment**

Reading: Millington & Wilson (2013), “Super intentions”

**Thursday – New Sports Realities: Video Games, E-Sports, and Media Technologies**

Reading: Jenny at al (2017), “Virtual(ly) athletes”

**NOTE:** Lit Review due **Friday at 11:59pm.**

**Week 13 (Apr 2 – 6)****Tuesday – Sports Analytics and Big Data**

Readings: Millington & Millington (2016), “‘The Datafication of Everything’;” Partnow (2016), “Moreyball, Goodhart’s Law, and the limits of analytics;”

**Thursday – Sports Nutrition and Hydration / 3MT Intro**

Reading: Brady & Ventresca (2014), “‘Officially a vegan now’”

**Week 14 (Apr 9 – 13)****Tuesday – Athletic Footwear: Standing at the Nexus of Science, Bodies, and Marketing**

Readings: Gibson (2012), “Knight’s Children;” Eden (2016), “The secret lab where Nike invented the power-lacing shoe of our dreams”

**Thursday – 3MT Assignment Workshop (in class)****Weeks 15 and 16 (Apr 16 – 20; Apr 23 – 25)****3MT Presentations**