

## CLASS SYLLABUS Spring 2012

**HTS 3089 Science, Technology and Sports MWF 12:05-12:55 PM D.M. Smith 104**

**Instructor: Dr. W. Pearson, Jr. Office: OCE, Room 119 Phone: 385-2265**

**E-mail: [willie.pearsonjr@hts.gatech.edu](mailto:willie.pearsonjr@hts.gatech.edu) Office Hours: MWF 1:00-2:00 PM and by appointment.** During my regularly scheduled office hours, if you are unable to meet or if I am unavailable (due to meetings or speaking engagements), please leave a voice-mail message or speak with me after class and we can set up an appointment for an alternative time.

**Required Readings: See Course Calendar**

**Text: T. Magdalinski, Sport, Technology and the Body: The Nature of Performance. New York: Routledge.**

**READINGS:** Additional required readings may be distributed in class or electronically. The instructor reserves the right to make revisions to the syllabus and course calendar. You are responsible for work according to any and all changes. In case of revisions, you will receive an e-copy to replace the original.

### **INTRODUCTORY STATEMENT**

This course is designed to introduce studies to the critical study of sports, science and technology. This is an emerging field that has its roots both in sport studies and also within science and technology studies.

To put the discussion in perspective, the course will:

- Discuss what constitutes a “sport”, technology and performance.
- Discuss the sociological processes relevant to the intersection of science, technology and sport.
- Examine the literature concerning debates on the role technology in supporting and contesting social inequality through sports.
- Discuss how scientists describe and interpret perceived human differences including that of racist science as related to sport performance.
- Examine the literature on the impact of science and technology on athletic performance.
- Discuss the debates surround cyborg athletes and the future of sport.

### **COURSE OBJECTIVES**

After studying the materials discussed in class, students should be able to:

- understand the social and cultural dimensions of sport, science and technology
- describe the historical contexts in which sports technology developed and continues to flourish
- describe the social, political, and economic forces that influence the development of sports technology
- understand how political and economic forces shape sports technology and athletic bodies

## Page 2, HTS 3089 Science, Technology and Sports

- describe how particular technologies have changed sports and dominant understandings of sporting bodies
- understand the underlying principles of significant debates on the impact of science and technology on sport
- apply a sociological perspective and its methods to the intersection of sports, science (inclusive of the social sciences) and technology
- demonstrate a working knowledge of core concepts, theories and methodologies
- understand the risks, ethics and social responsibilities associated with sports, science and technology
- understand the relationship between science and ideology in sports
- critically analyze and evaluate scholarly literature on various dimensions of science, technology and sport
- effectively use written and oral forms of communication to construct compelling arguments
- effectively synthesize research findings
- gain a deeper understanding of the course materials through collaborative learning with peers
- gain sociological knowledge and perspectives on contemporary sporting practices
- improve ability to articulate complex arguments

### COURSE FORMAT

The course format will consist of lectures, discussions and presentations.

### COURSE REQUIREMENTS

**NOTE:** The course requirements will be adjusted to serve the needs and capabilities of students with disabilities that may negatively impact academic performance. **The Georgia Tech Honor Code applies to all student work. Each student is responsible for signing the daily attendance sheet and managing his/her personal folder of class participation and returned assignments. Also, each student is responsible for returning each graded assignment to the coursework folder within one class week.**

### Page 3, HTS 3089 Science, Technology and Sports

The final grade will be determined from the average score derived from the following course requirements:

1. **Class participation** (individual and group). Over the course of the semester, each student will serve as a co-discussion leader by presenting a 15-20 minute synthesis of the assigned reading(s), after which the discussion will be opened to the entire class. You are strongly encouraged to supplement the assigned readings with other relevant readings and/or video clips. Given the criticality of class participation, it is

imperative that you keep up with your reading assignments and be well-prepared (this means having thought critically about the readings) to constructively engage in a **Page 3, HTS 3089 Science, Technology and Sports**

spirited but respectful discourse. During your reading, it is highly recommended that you take notes and formulate questions. You are expected to be an active participant. Always bring your text, readings, notes and questions to each class. Participation is not evaluated in terms of how many times you comment, but by the clear demonstration that you have read and comprehended the assignments, and the quality of your overall engagement in the discussion. Class participation includes the end-of-term presentations. A weekly participation performance evaluation form is provided in class for your review.

2. **Critiques.** Four to five page, double-space typed critiques are due in class each Friday (unless otherwise noted). ***Critiques are not summaries of the readings.*** Rather, they are focused arguments documented by evidence from the texts, lectures and other assigned readings. Informed opinions are encouraged. The critique must examine the strengths and weaknesses of the authors' argument. **In all cases, one or more of the theoretical perspectives covered in the text and lecture must be applied in the assessment.**

The critique requirement includes one group project paper (8-10, typed double-space pages). The group project involves the participation of up to 8 classmates applying a theoretical approach to an international, national, state or local issue relevant to science, technology and sports.

3. **Research paper.**

The paper—15-20 pages, typed, double-space, including an abstract and annotated bibliography--may be single or co-authored (up to 6 classmates). Approval of the topic is based on the acceptance of an abstract (see Course Calendar). A majority of the sources for the paper must not come from Internet websites. You are encouraged to seek assistance from the professionals at the GT library. The library staff is very knowledgeable about databases and other informational sources. For an additional resource on preparing a high-quality research paper, see Booth, W. C., Colomb, G. C. and Williams, J. M. (most recent edition). ***The Craft of Research.*** Chicago: The University of Chicago Press. Major elements of the paper will be covered in class. At various points during the course, you are provided class release time to work on your research paper and group project.

**NOTE: Your name and page number must appear on each page of all written assignments. Failure to do so results in an ungraded paper.**

4. **Presentation.** You will present the results of your research paper during the class period at the end of the semester (a scoring guide will be provided at least two

weeks prior to the scheduled presentation). The presentation must be clearly and professionally delivered. If your presentation involves the use of AV equipment, you are **Page 4, HTS 3089 Science, Technology and Sports**

strongly advised to come to class early in order to test the equipment. If you plan to distribute handouts, you are responsible for providing a sufficient number of copies for the class. Note that any missed presentation cannot be rescheduled because of designated time slots. Time slots are assigned based on priority of accepted research paper abstracts.

The above four assignments are all required and will be weighed equally (25% each) in determining your final grade. Students do have the option of also taking 2 exams in addition to the four requirements above. For those students taking this option—all assignments and the two tests will be weighted equally. More information about the weighting of the optional exams will be distributed at a later time to those students choosing this option.

5. **Optional Exams.** Two essay exams—a midterm and a final—are administered during the conference hours. Students are allotted one hour and 15 minutes to complete each exam. **Students selecting this optional must request it in writing not later than February 1, 2012.**

**All requirements (including optional exams) are weighted equally and will be based on the following scale:**

**A = 100-93 B = 92-85 C = 84-75 D = 74-65 F = below 65**

Assignments are scheduled for each week. Because all written assignments are given far in advance; **no tardy assignment will be accepted.**

**Attendance Policy.** Each student is responsible for signing the daily attendance sheet. Approved absences typically include: illness, religious holidays, family and personal emergencies, and official representation of GT in extracurricular events. To the extent possible, email and leave a voice message regarding anticipated absences. *In the case of a borderline final grade (1 point from the next higher grade), those with fewer than two unexcused absences will automatically receive the higher grade.*

**Classroom Protocol.** Please adjust your cell phone or similar electronic device to the “off” position during class. Do not use your computer in class without permission of the instructor.

**Page 5, HTS 3089 Science, Technology and Sports**

**HTS 3089 Science, Technology and Sport Spring 2012 Course Calendar**

**Part I: Introduction and Overview of the Course: What Does Sociology Contribute to Our Understanding of Science, Technology and Sport?**

- January 9 M **OVERVIEW**  
T. Magdalinski, Chapter 1: Introduction: Sport, the Body and Performance Technology 1-13
- January 11 W **INTRODUCTORY LECTURE: Definitions, Theory and Methodology**  
  
T. Magdalinski , Chapter 2, The Nature of Sport 14-30  
T. Magdalinski , Chapter 3, The Nature of the Body 31-53
- January 13 F **INTRODUCTORY LECTURE Chapter 2 and 3 CON'T**
- January 16 M **M.L.K., Jr. Holiday**
- January 18 W **What Counts as Sport Performance?**  
T. Magdalinski ,Chapter 4 The Nature of Performance 54-70

**ABSTRACT Hardcopy Due. (For instruction on preparation, see <http://www.emeraldinsight.com/authors/guides/write/abstracts.htm#2>)**

**Part II: Science and Technology Construct Sporting Bodies, Health and Injury**

- January 20 F **History, Science and Technology: Creating the Black Sporting Body**  
D. Wiggins, (1989). "Great Speed But Little Stamina: The Historical Debate Over Black Athletic Superiority." **Journal of Sport History**, **16**, 158-185.  
  
**ABSTRACT Returned.**
- January 23 M **Challenges to Racist Science Through Sport**  
A. Bass (2004). What is this Black in Black Athlete? In **Not the Triumph But the Struggle: The 1968 Olympics and the Making of the Black Athlete**. Minneapolis: University of Minnesota.
- January 25 W **Racist Science and the Struggle Continues**  
O. Harris (2007). Taboo's Explanation of Black Athletic Dominance:

**Page 6, HTS 3089 Science, Technology and Sports**

More Fiction Than Fact. In D. Brooks & R. Althouse, (Eds.), **Diversity and Social Justice in College Sport: Sport Management and the Student Athlete**. Morgantown: Fitness Information Technology.

**GROUP ABSTRACT DUE**

January 27 F **INTRODUCTORY LECTURE: *Science and Technology Studies***

**GROUP ABSTRACT RETURNED**

January 30 M **Technology, Sport and Embodied Metaphors**  
J. Rintala, (1995). "Sport and Technology: Human Questions in a World of Machines." **Journal of Sport and Social Issues**, 19(1) 62-75

February 1 W **Health and Risk**  
P. Safai, (2013). Sports Medicine, Health and the Politics of Risk. In D.L. Andrews & B. Carrington (Eds.). **A Companion to Sport**. Oxford: Wiley Blackwell.

February 3 F **Bodies, Emotion and Risk**  
J. Laurendeau (2013). "'Just Tape It Up for Me, OK?'" Masculinities, Injury and Embodied Emotion." **Emotion, Space and Society (online)**.

February 6 M **RESEARCH DAY**

February 8 W ***Pain and Technology***  
G. Downey (2007), "Producing Pain: Techniques and Technologies in No-Holds-Barred Fighting." **Social Studies of Science** 37(2): 201-226.

February 10 F **Gender and Sport Injury**  
N. Theberge (2011), "Studying Gender and Injuries: A Comparative Analysis of the Literatures on Women's Injuries in Sport and Work." **Ergonomics** 55(2),183-193.

February 13 M **Gender and Health**  
E. Rich & J. Evans (2013). Physical Culture, Pedagogies of Health and the Gendered Body. In D.L. Andrews & B. Carrington (Eds.). **A Companion to Sport**. Oxford: Wiley Blackwell.

## Page 7, HTS 3089 Science, Technology and Sports

### Part III: Extending the Sporting Body Through Technology

- February 15 W     **Technology Enhancing Sport: Issues and Controversies**  
D. James (2010), "The Ethics of Using Engineering to Enhance Athletic Performance," **Procedia Engineering**, 3405-3410
- February 17 F     **Equipment Extending the Body**  
S. McCullough (2010), "Body Like a Rocket: Performing Technologies of Naturalization." **Thirdspace**, 9, (2), online
- February 20 M     **Enhancing the Sporting Body**  
T. Magdalinski , Chapter 7, Enhancing the Body from Without: Artificial Skin and Other Prosthetics
- February 22 W     **Disability and Prosthetics**  
D. Howe (2011), "Cyborg and Supercrip: The Paralympics, Technology and the (Dis)empowerment of Disabled Athletes." **Sociology**, 45(5):868-882
- February 24 F     **Discourses of Dis/Ability and Technology**  
B. Burkett, et. al. (2011). Shifting Boundaries in Sports Technology and Disability: Equal Rights or Unfair Advantage in the Case of Oscar Pistorius? **Disability & Society**, 26(5), 643-654.
- February 27 M     **Technology, Policy and Sport: Inclusion/Exclusion**  
A. Smith & N. Thomas, (2012). "The Politics and Policy of Inclusion and Technology in Paralympic Sport: Beyond Pistorius", **International Journal of Sport Policy and Politics**, 3(4), 397-410.

### Part IV: Science, Technology and Performance Enhancement: Issues and Controversies

- February 29 W     **INTRODUCTORY LECTURE: Performance Enhancement**
- March 2        F     **Technology as Advantage**  
L. Bell (2009), "Breaking the Speed Limit: Studies Examine Physiology and Technology to Foresee the Ultimate Edge of Human Performance." **Science News**. Dec. 5.
- March 5        M     **Nonotech and Sport**  
K. Maney (2004). "Nanotech Could Put a New Spin on Sports." **USA Today**. Nov. 17.
- March 7        W     **History of Doping and Performance Enhancement in Sport**

**Page 8, HTS 3089 Science, Technology and Sports**

D. Mattram (2011). A Historical Perspective of Doping and Anti-Doping in Sport. In **Drugs in Sport**. New York: Routledge

- March 9 F **Ethics of Doping**  
Loland, S. (2009). "The Ethics of Performance-Enhancing Technology in Sport." **Journal of Philosophy of Sport**, 36(2),
- March 12 M **Doping and Drugs: Nature versus Culture?**  
I. Van Hilvoorde, R. Vos, & G. de Wert (2007), "Flopping, Klapping and Gene Dopping: Dichotomies Between 'Natural' And 'Artificial' in Elite Sport." **Social Studies of Science** 37(2): 173-200
- March 14 W **Steroids, Masculinities and Femininities**  
N. Thualagant, (2012), "The Concept of Fitness Doping and It's Limitations." **Sport in Society**, 15(3), 409-419.
- March 16 F **Media, Meaning and Steroids**  
M. Utsler & S. Epps (2013). "Damage Repair Through TV: The Strategies of McGwire, Rodriguez and Bonds." **Journal of Sports Media**, 8(1), 139-161.

**RESEARCH PAPER DUE**

March 19-23 **SPRING BREAK (Travel Safely)**

- March 26 M **RESEARCH DAY**
- March 28 W **The Body and New Structures of Sport?**  
M. R. King (2012). A League of Their Own? Evaluating Justifications for The Division of Sport into 'Enhanced' and 'Unenhanced' Leagues. **Sport, Ethics and Philosophy**, 6(1),
- March 30 F **Cyborgs of Sport**  
T. M. Butryn (2003), "Posthuman Podiums: Cyborg Narratives of Elite Track and Field Athletes." **Sociology of Sport Journal**. 20, 17-39.

**RESEARCH PAPER RETURNED**



**Page 9, HTS 3089 Science, Technology and Sports**

April 2	M	<b>Gene-Doping: Facts, Fictions and the Future</b> H. Sheridan. (2006). "Gene-Talk and Sport-Talk: A View from the Radical Middle Ground." <b>European Journal of Sport Science</b> , 6(4), 223-230. _____
April 4	W	<b>Enhancing the Future of Sport Performance?</b> A. Miah (2006). "Rethinking Enhancement in Sport." <b>Annals of New York Academy of Science</b> , 301-320.
April 6	F	INTRODUCTORY LECTURE: <b>Futurist Perspectives</b>  <b>GROUP CRITIQUE AND BRIEF REPORT DUE</b>
April 9	M	<b>Sports and Technology in the Future: Are We Agents of Change?</b>
April 11	W	<b>RESEARCH DAY</b>
April 13	F	<b>RESEARCH DAY</b>
April 16	M	<b>PRESENTATIONS</b>
April 18	W	<b>PRESENTATIONS</b>
April 20	F	<b>PRESENTATIONS</b>
April 23	M	<b>PRESENTATIONS</b>
April 25	W	<b>PRESENTATIONS</b>
April 27	F	<b>PRESENTATIONS/WRAP UP</b>