***THIS IS YOUR CONTRACT; PLEASE READ IT CAREFULLY***

SOCI 210: Sociology of Technology & Science  
TR 9:35-10:50 a.m., HECC 201, Fall 2014  
Professor Sarah N. Gatson  
Office: 427 Academic; 845-7267; gatson@tamu.edu  
Office hours: 11:00-12:00, TR; 1:00-3:00 W; and by appointment

Course Description: This course examines the way in which both science and technology are affected at a fundamental level by the social contexts in which they develop, challenging the common view that technological change follows its own logic of progress, independent of human actors. Students will develop critical thinking skills to understand how engineered products are shaped by social factors as well as how they contribute to shaping society by examination of case studies ranging from military to household technologies, including such things as the bicycle, M-16 rifle, and word-processing software. Attention will be given to the roles of unarticulated or tacit knowledge in science and engineering and to ways in which society has gendered certain technologies.

Learning Outcomes: By the end of the course, students will

- Analyze various social contexts of science and technology production, and Compose 1) several short pieces of analytical written work (concept papers and written discussion responses), and 2) a collection of current discussions of technology or science in the media (Clip journals)
- Critically Apply sociological concepts to various examples of current scientific and technological events, products, and processes, and Describe them in a media-literate fashion, and Assemble the information in clip journals and a team presentation.

Pre-requisites: None

TEXTS:

Required:
Books (at the MSC or to be purchased used online)
Donald MacKenzie & Judy Wajcman                        The Social Shaping of Technology (2nd edition)
Alondra Nelson, Thuy Linh Tu, & Alicia Headlam Hines    Technicolor: Race, Technology & Everyday Life
Ruha Benjamin                                          People's Science: Bodies and Rights on the Stem Cell Frontier

Readings on Library eReserve (unless otherwise noted)
Noelle Foster Feliciano, “Contingent mechanization: The case of American dairying” (May be found online; link will appear on our eCampus site).
Norman C. Ellstrand, excerpt from Dangerous Liaisons? When cultivated plants mate with their wild relatives (May be found online; link will appear on our eCampus site).
Susan Sperling, “Baboons with briefcases versus langurs in lipstick”
Catherine Lee, “The unspoken significance of gender in constructing kinship, race, and nation”
Nina Kohli-Laven, “French families, paper facts, genetics, nation, and explanation”
Bruno Latour, “From order to disorder”
Lawrence Lessig, “Regulating code”
Kathryn Henderson, “Coding and claiming: Codification and the rise of engineering as a profession” and “The visual culture of engineers: Drawing, seeing, and standardizing perception”
Signe Rousseau, “Nutritionism, bad science and spectacles of disordered eating,” and “Obesity: Whose responsibility is it anyway?”
Thomas Laquer, “The facts of fatherhood”
Birrer, “Counteranalysis: Toward social and normative constraints on the production and use of scientific and technological knowledge”

Recommended Reading
Guston & Sarewitz, eds., Shaping Science & Technology Policy
Latour, Laboratory Life
Wailoo, Nelson, & Lee, eds., Genetics and the unsettled past: The collision of DNA, race, and history
Bliss, Race decoded: The genetic fight for social justice
Lessig, Code, and other laws of cyberspace
Henderson, On line and on paper
Skloot, The immortal life of Henrietta Lacks
Nakamura, Chow-White, Nelson, eds., Race after the Internet

Schedule (*** highlights weeks when an assignment is due):
Week 1: 9/1-5: Introduction: The Social Shaping of Technology
T: Introductory discussion. Course objectives and Discussion of requirements.
FILM: Faber-Castell pencil production (YouTube; link on eCampus)
R: MacKenzie Part I:
  Introduction
  Do Artifacts Have Politics?
  Edison and electric light
  Inventing personal computing

Week 2: 9/8-12: Themes in Sociological and Historical Studies of Technology
T: MacKenzie: Part I:
  Constructing a bridge
  Competing technologies and economic prediction
  The social construction of a technology
R: Sperling; Bliss; MacKenzie: Part I:
  Redefining the social link from baboons to humans
  Making ‘white’ people white

*Week 3: 9/15-19: The Technology of Production
T: MacKenzie Part 2:
  The watermill and feudal authority
  The machine versus the worker
  Technology and capitalist control
  Social choice in machine design: the case of automatically controlled machine tools
  The material of male power
R: MacKenzie Part 2:
  What machines can’t do: politics and technology in the industrial enterprise
  Writers, texts, and writing acts: gendered user images in wordprocessing software
  Learning by trying: the implementation of configurational technology
Working relations of technology production and use
End of W3: #1 T&S Clip Journal due on eCampus, Friday by 5 p.m.

*Week 4: 9/22-26
T: MacKenzie, Part 1:
   Caught in the wheels: the high cost of being a female cog in the male machinery of engineering
MacKenzie, Part 4: Manufacturing gender in military cockpit design
R: MacKenzie, Part 4:
   Cold War and white heat: the origins and meaning of packet switching
   The American army and the M-16 rifle
   The Thor-Jupiter controversy
   The weapons succession process
   Theories of technology and the abolition of nuclear weapons

1st Concept Paper due at end of week 4 on eCampus, Friday by 5 p.m.

Week 5: 9/29-10/3
T: Latour
R: Lessig

*Week 6: 10/6-10
T: MacKenzie, Part 3: All
R: Lee; Kohli-Leven

End of W6: #2 T&S Clip Journal due on eCampus, Friday by 5 p.m.

Week 7: 10/13-17
T: Gatson (1997 & 2014), Laquer
R: Benjamin, pp.1-54

*Week 8: 10/20-24
T: Benjamin, pp.55-112
R: Benjamin, pp.113-182

End of W8: #3 T&S Clip Journal due on eCampus, Friday by 5 p.m.

Week 9: 10/27-31:
T: Nelson, Tu, & Hines, pp.1-63
R: Nelson, Tu, & Hines, pp.64-99

*Week 10: 11/3-7
T: Nelson, Tu, & Hines, pp.100-153
R: Nelson, Tu, & Hines, pp.154-198

2nd Concept Paper due at end of week 10 on eCampus, Friday by 5 p.m.

Week 11: 11/10-14
T: Elistrand, pp.3-26
R: Feliciano, pp.34-89

*Week 12: 11/17-21
T: Rousseau: "Nutritionism, bad science and spectacles of disordered eating"
R: Rousseau: "Obesity: Whose responsibility is it anyway?"

End of W12: #4 T&S Clip Journal due on eCampus, Friday by 5 p.m.
*WEEK 13: 11/24-28: Science, Technology, and Democracy-Begin technology court
READ: Birrer
T: Groups 1-2 present
R: THANKSGIVING HOLIDAY; NO CLASS
*WEEK 14: 12/1-5: Class presentations and technology court continue
T: Groups 4-5 present
R: Groups 7-8 present

LAST DAY OF CLASS, REDEFINED DAY, DECEMBER 9, 2014: Groups 9-10 PRESENT
CLASS PARTICIPATION & ABSENCE POLICY: I do not take attendance; it is your responsibility to come to class on time and to be responsible for the material covered therein. While I am happy to answer questions pertaining to the course, I will not re-provide lectures or produce my lecture notes for you — THE POWERPOINTS USED IN CLASS AND AVAILABLE ONLINE ARE NOT FULL NOTES; THEY ARE OUTLINES. If you miss class for any reason, your best option for getting back up to speed is to communicate with other students, whom you may ask to share their notes. Please see Rule 7 under Part I (http://student-rules.tamu.edu/rule07) for details on excused absences, which I only need to be notified of in the event of missing an assignment or exam deadline, so that make-up work may be scheduled.

ASSIGNMENTS — All assignments should be uploaded to corresponding assignment areas on eLearning. Make sure to save a copy of all assignments. ALWAYS MAKE SURE TO MAKE A BACK-UP COPY; NEVER ERASE YOUR PAPER FROM DISK UNTIL AFTER THE SEMESTER ENDS, TO AVOID “LOST” PAPERS. If you ever have trouble uploading an assignment, MAKE SURE TO EMAIL A COPY to me either through eLearning or to my regular TAMU account by the deadline — emails are automatically time-stamped, and you will not be sanctioned for missing the deadline.

Grade will be based on:
- discussion questions 20%
- technology & society clip journal (due every 2 weeks) 30%
- concept papers (1-2 pages) 30%
- one team oral presentation for technology court w/handout 20%

DISCUSSION QUESTIONS: 20%/40 points (4 X 10 points). These are online responses to discussion questions posted on eCampus. They have deadlines attached to them. They are not on the schedule, and serve as a way to make sure you are engaged with the course materials, and with one another — 7 points will be awarded for the original response you make to the question, and 3 points for a response you make TO ANOTHER STUDENT’S RESPONSE. Although I encourage you to continue your discussions, YOU WILL NOT RECEIVE ADDITIONAL POINTS FOR RESPONDING TO MORE THAN ONE OTHER STUDENT’S RESPONSE.

CLIP JOURNAL: 30%/60 points (4 X 10 points). Your clip journal is an on-going opportunity to apply concepts from this course to the world outside the classroom. You should find some discussion of technology or science in the media (internet, newspapers, magazines, television) and apply a concept we have discussed to it. Review these writings and clippings when they are returned with comments. At the end of the semester you will hand in your entire clip journal with some summary comments and analysis of what the experience has provided as a learning tool. More information and examples will be handed out later.

CONCEPT PAPERS (CPs): 30%/60 points (2 X 30 points). These are short, 1-2 page papers used to assess your grasp of concepts and materials discussed in class. They are based on discussion prompts that I will either present in class or post online at our eCampus site. The graded CPs should be saved and referred to when constructing other assignments.

TEAM ORAL PRESENTATION ON A NEW TECHNOLOGY: 20%/40 points The final weeks of the course we will hold a “technology court” (based on the Birrer reading) to apply what we have learned, as we debate whether certain new technologies should or should not be developed in consideration of social and ecological costs and impacts. Each team of students will present and defend a new technology. (Each person in the team must present 5 minutes of the whole) Using ideas from the course the rest of the class will question and debate the merits of the proposed
technology and come to a final judgment on whether it should be developed or not. Teams may present technologies from any of the course readings, from hand-outs provided by Dr. Gatson, or from their own research. A 1-page handout, describing the technology and enumerating its advantages should be provided in hard copy form for class members. Power-point presentations are optional. Students will fill out an evaluation of peer participation for fellow team members.

*Note on use of internet sites: All internet information should be cited just as if the materials were published in a book or journal. For the purposes of the clip journals, a print-out is sufficient. If you use other internet materials for analysis in your short papers, cite it with author (individual name or institution posting the site), title, and the web site address. Just like books and journals, direct quotes should include quotation marks followed by author and page number; a paraphrase should include author and page number at the end of the paragraph. The full citation with web address should then appear in a bibliography. Using materials from the internet (or anywhere else, for that matter) and attempting to pass them off as your own work is plagiarism which is illegal and could result in a failing grade. A handout on how to cite from the internet will be provided.
Format for Papers

All papers must conform to the following guidelines:

Cover page: This page should have your name, course and section number, and any other identifying information. Do NOT repeat any of this information in the text of your paper, unless it is in a header or footer (i.e. it should not be used to take up space in the body of the paper).

Margins: All margins (top, bottom, right and left) must be 1 inch. If you are using Microsoft Word, click on File; click on Page Set up; under Margins, enter the number “1.” If you have trouble doing this, SEE ME prior to turning in the paper.

Spacing: Double-spaced, except for any lengthy (taking up more than four lines of text) quotations, which should be indented and single spaced. Do NOT put an extra space between paragraphs.

Font: You must use 12-point font. Size matters. Style (as long as it isn’t one of the fancy or symbol fonts) doesn’t. Personally, I prefer Times New Roman.

Length: Adhere to the page-length requirement in the syllabus for each paper assignment – these length requirements are meant to highlight the need for editing to make your paper more concise and clear. If, before you turn in the paper, you find that you are more than a line or two under or over the required length, this is a signal to you that you need to do some re-writing.

Grammar and Proofreading: Adhere to standard American English spelling and grammar requirements. Proofread your papers, as spell-checking with a computer program is not the same thing as using language properly, and spell-check will not alert you to typographical errors other than misspelled words. If you have concerns about your proof-reading skills, ask a classmate to proof your paper for you, as it is often easier to catch someone else’s mistakes. You may also go to the Writing Center in the English Department – for more information: http://writingcenter.tamu.edu/.

Sources/Works cited/Bibliography: If the paper is a research rather than a short response paper (i.e., you are required to outside research of primary and/or secondary materials), please include a full bibliographic section, in alphabetical order, of the sources you used. Within the text itself, you may use whatever citation format with which you are most comfortable. If you are unfamiliar with citation formats, you may check out the online Chicago Manual of Style for commonly used formats: http://www.chicagon manualofstyle.org/tools.html. The parenthetical method of citation within the text – (Gatson, 1997: 56) or (Gatson, 1997, p.56) is generally more concise and easy to read. Online sources are fine for general research, but must be cited as such, and you must be able to explain why they are relevant when a research article was just as available as a source. News articles may be used as sources if they are being used to illustrate the existence of a phenomenon or cultural concept, but NOT as independent research sources like law review articles or scholarly journal articles or books.

All of the above are meant to be read as requirements aside from the content requirement of critical engagement with the course materials. These requirements may seem nit-picky to you, but they are required because the various ways students have of getting around length and style requirements often make the papers vastly unequal and difficult to grade on an acceptable standard.
The papers will be graded on the following percentage system: 40% for content, and understanding and application of the material; 30% for clarity and structure of your argument; and 30% for the grammar and style/format and proofreading rules.

Making the same guidelines errors will result in more points off than that occurrence in the first paper.
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<tr>
<th>Sample Grading Rubric</th>
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<tr>
<td><strong>Use of sociological concepts</strong></td>
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<tr>
<td><strong>Organization</strong></td>
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<td><strong>Presentation</strong></td>
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<td><strong>Grammar</strong></td>
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<td><strong>Overall score</strong></td>
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The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for a reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Office of Support Services for Students with Disabilities in Room 126 of the Student Services Building. The phone number is 845-1637.

Aggie Honor Code

"An Aggie does not lie or cheat or tolerate those who do."

Our conduct in this class should embody the spirit as well as the letter of the Aggie Honor Code. If you have any questions about the code or Honor Council and its Procedures, please consult the "Know the Code" website found at http://student-rules.tamu.edu/aggiecode.