SCTS 101: Introduction to Science, Technology, and Society (3 credits)
Fall 2018

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Office Location: 3101 Market, 2nd Floor, 222
Office Hours: Mondays and Wednesdays 10:00-11:00AM, and by appointment.
Meeting Time: Mondays and Wednesdays, 3:30 PM-4:50 PM
Term: Fall quarter

Course Description:
Participants in this course will explore how science and technology studies (STS) scholars analyze the social dimensions of technology and science. This course is an introduction to how political, social, and economic factors shape the development of scientific concepts, medical practices, and technological designs and vice versa. These include how users help determine the contours of technologies, or how institutional structures encourage scientists to frame their work in particular ways. We will also discuss the political effects of scientific knowledge and specific technologies, exploring the costs and benefits of current techno-scientific arrangements. The course will emphasize STS approaches to environmental change, genetics and medicine, and digital identities and lives. The course will emphasize critical dialogue and collective analyses of contemporary techno-scientific practices.

Learning Outcomes:
By the end of the course, students will:
1. Develop an understanding of how STS scholars study scientific and medical knowledge and technological artifacts.
2. Develop critical reading and writing skills, including their ability to analyze news coverage of science, medicine, and technology.
3. Learn how to evaluate policies and regulations related to science, technology, and medicine in terms of historical developments and social consequences.
4. Refine discussion skills through presentations, group assignments, and debate.

The course is organized around three activities:
1. Critical reading and responses
2. Engaged in-class discussion and activities
3. Midterm and final evaluations

Required Course Texts:
Books:
Jason Corburn, *Street Science: Community Knowledge and Environmental Health Justice* (2005)
Rebecca Skloot's *The Immortal Life of Henrietta Lacks* (2010)
M.T. Anderson's *Feed* (2002)

Articles and Book Chapters (These are uploaded on our BlackBoard site):

Langdon Winner, 1980, "Do Artifacts Have Politics?"

Sergio Sismondo, 2010, Chapter 1: The Prehistory of Science and Technology Studies, pp.1-11.

Sandra Harding, 2008, "Chapter 5: Postcolonial Science and Technology Studies."

Jonathan Kahn. 2006. "Race, Pharmacogenomics, and Marketing: Putting BiDil in Context." *The American Journal of Bioethics.* 6 (5): W1-W5.

Michael Yudell, Roberts, Dorothy, DeSalle, Rob, and Tishkoff, Sarah. "Taking Race out of Human Genetics." *Science.* 351 (6273): 564-565.

Natasha Dow Schull. 2016. "Data For Life: Wearable Technology and the Design of Self-Care." *BioSocieties.*

Chris Kelty et al. 2015. "Seven Dimensions of Contemporary Participation Disentangled." *Journal for the Association of Information, Science, and Technology.*

Sergio Sismondo. 2008. "Science and Technology Studies and an Engaged Program." The Handbook of Science and Technology Studies.

Grading Scale

• A+	97-100	C+	77-79
• A	93-96	C	73-76
• A-	90-92	C-	70-72
• B+	87-89	D+	67-69
• B	83-86	D	60-66
• B-	80-82	F	<60

Course Evaluation:

Your course grade will be calculated as follows:

Reading Responses	20%
Class Participation	20%
News Story Share	5%
Group Projects	10%
Midterm	15%
Final Exam	30%

Attendance is required. You are allowed one unexcused absence. Subsequent absences will result in a five-point grade reduction per absence. If you show up "on time" and ready to learn for every class this term, three points will be added to your overall course grade.

Please see the university policy on excused absences:
http://drexel.edu/provost/policies/absence/
In essence, an absence will only be excused with official documentation. Y*our grade is very dependent on coming to class, on time, and meeting assignment deadlines throughout the term.* Details on what is expected in each assignment are provided below. You are responsible for maintaining electronic backup copies of your work. We also recommend taking advantage of Drexel's writing and research resources (https://drexel.mywconline.com/).

Course Assignments

Active Class Participation (20 points, 20%)

Attendance is required, being on time is imperative, and active participation is expected. Participation is graded for each class session. Please see the attached guidelines for in-class conduct. There are three elements of participation you should keep in mind: Interaction, technology use, and timeliness. Active class participation means listening, being attentive to speakers and engaging peers, guest speakers, and instructors; this also means helping to create a space where everyone in the room can participate. Disruptive class conduct will result in points off your overall course grade. Do not dominate class discussion. Listen, take notes, engage. Smart phone use is not allowed during class; points will be deducted from your course grade for non-course related use of digital technology between 12:00-1:50PM. Laptops should be brought to class and we will use them regularly, but laptops should only be used for course activities. It is very obvious and distracting when students are using personal technology for non-course related activities. If it feels like you or others are being distracted by your personal technology, you will lose a point for the day. Finally, please arrive and be in your seat ready to start at 12:00PM. We will start promptly at 12:00PM. One late appearance is allowed, afterwards 1 point will be deducted from your overall course grade for each time you are late.

Reading Responses (20 responses x 1 point per response = 20 points, 20%)
Reading responses are due before every in-class meeting. These responses must be submitted via the Blackboard Discussion Forum by 9:00AM on the day of class. Your post should include a reflection on the reading and also a question that you have about the reading that you would like to discuss in class. We will discuss your responses and your questions in class. The response should be approximately 100 words. They can be informal but with only 100 words to work with: Be effective. Reading responses should be probing and generative; do not summarize the reading. Reflect and ask questions in your responses. Point to how the reading can be useful for something we are trying to learn as a class, and how it connects to other topics we're learning about. Think of the reading responses as a quick mechanism to help you get your thoughts down on paper and jumpstart class discussion. Each response is worth up to one point towards your "Reading Response" grade. You need to reflect (not summarize) and pose a question to earn the full response point.

News Story Share (5 points, 5%)
Find a recent news story that addresses an issue of science, technology, and/or medicine. Stories must be taken from prestigious, well regarded publications and should be timely. News stories must say something of substance about the issue. Speculation and opinion without data will not receive full credit. You will share one news story with the class this term. You must post your news stories and answer the three analytic questions in the Blackboard Discussion Forum by 12PM the day before the class during which you'll share the story.

Group Work (10 points, 10%)
Beyond class participation, we will also use group activities where you will be asked to collaborate with others and turn in written work. There will be 3-4 group assignments over the course of the term.

Midterm Exam (15 points, 15%)

The midterm exam will be given on Monday October 24th. The exam will include short essay questions and one long essay question. The exam will be closed book.

Final Exam (30 points, 30%)
The final exam will be given during our assigned time slot during finals week. The final exam will also include a mix of short essay questions and long essay questions. We will spend the final class (Wednesday November 30th) reviewing.

Academic Policies

Academic Honesty
Academic honesty of the highest order is expected. It is not acceptable to submit work done for another class in this class, though it is acceptable to build on previous work. Talk to us if you have questions about this. Nor, of course, is it acceptable to submit work done by someone else as your own. Citations must be included for both indirect and direct quotation, providing clear documentation of sources. Special care must be taken to properly cite digital resources. Please see the Student Handbook for complete guidelines on academic honesty: http://drexel.edu/studentlife/community_standards/studenthandbook/general_information/code_ of_conduct/.
You can read more about the University's policy on and definition of plagiarism here: http://drexel.edu/provost/policies/academic-integrity/. *If we are able to confirm plagiarism or another form of academic dishonesty on any assignment in this course, you are likely to fail the entire course.* As Drexel students, you are responsible for reading and adhering to Drexel's Code of Conduct:
http://www.drexel.edu/studentlife/community_standards/studentHandbook/general_information/code_of_conduct/
Reporting process can be found at this link:
http://drexel.edu/studentlife/community_standards/facultystaff/integrity/)

Attendance
Attendance is required. You are allowed one unexcused absence. Subsequent absences will result in a five-point grade reduction per absence. If you show up "on time" and ready to learn for every class this term, three points will be added to your overall course grade.

Please see the university policy on excused absences:
http://drexel.edu/provost/policies/absence/
In essence, an absence will only be excused with official documentation.

Grade Appeals
You may appeal a grade through a written statement describing the grounds on which a change of grade should be considered appropriate. Grade appeals must be submitted within one-week of receiving the grade. Before initiating a formal appeal, feel free to talk to us. Please wait a minimum of 24-hours after receiving the grade before contacting us about a grade appeal.

Add, Drop & Withdraw Policies
- Please review Drexel's add and drop policies at:
  http://drexel.edu/provost/policies/course-add-drop/
- The course **withdrawal** deadline is in week 7. You will have received some graded work prior to this deadline. If you have any questions about your progress at any time of the term, please contact me. If you choose to withdraw, a "W" will be recorded in your transcript: See http://drexel.edu/provost/policies/course-withdrawal/

Course Change Policy
As the instructor, I have the right to modify this syllabus at any time. I will solicit feedback from the class before any changes are made, and students will be notified in a timely manner both in class and via Drexel email.

Students with Disabilities
Students with disabilities that have been certified by the Office of Disability Resources should inform us of their needs as soon as possible so that we can accommodate any necessary modifications. The Office of Disability Resources is located at 3201 Arch Street, Suite 210. For more information, see http://drexel.edu/oed/disabilityresources/overview/

Course Schedule

WEEK ONE

Monday   **Introduction to STS**

Wednesday   **Do Artifacts Have Politics?**
Wednesday Reading:
Langdon Winner, "Do Artifacts Have Politics?"
Sergio Sismondo, Chapter 1: The Prehistory of Science and Technology Studies

WEEK TWO

Monday   **Environmental Change & the Anthropocene**
Monday Reading:
Street Science, pp. xi-46.
Wednesday   **Environmental Change & the Anthropocene**
Wednesday Reading:
Street Science, pp.47-78.

WEEK THREE

Monday   **Environmental Change & the Anthropocene**
No Class / Columbus Day

Wednesday   **Environmental Change & the Anthropocene**
Wednesday Reading:

Street Science, pp.79-110.

WEEK FOUR

Monday
Monday Reading:
Street Science, pp.111-144.

Wednesday   **Environmental Change & the Anthropocene**
Wednesday Reading:
Street Science, pp.145-218.

WEEK FIVE

Monday   **STS Theoretical Interlude**
Monday Reading:
Sandra Harding, "Chapter 5: Postcolonial Science and Technology Studies"

Wednesday   **Genetics & Biomedicine**
Wednesday Reading:
The Immortal Life of Henrietta Lacks, pp. xiii-88.

WEEK SIX

Monday   **Genetics & Biomedicine**
Monday Reading:
****MIDTERM IN CLASS****

Wednesday   **Genetics & Biomedicine**
Wednesday Reading:
The Immortal Life of Henrietta Lacks, pp. 89-143.

WEEK SEVEN

Monday   **Genetics & Biomedicine**
Monday Reading:
The Immortal Life of Henrietta Lacks, pp. 144-285.

Wednesday   **Genetics & Biomedicine**
Wednesday Reading:
The Immortal Life of Henrietta Lacks, pp. 286-328.

WEEK EIGHT

Monday   **Genetics & Biomedicine**
Monday Reading:
Kahn, Jonathan. 2006. "Race, Pharmacogenomics, and Marketing: Putting BiDil in Context." *The American Journal of Bioethics*. 6 (5): W1-W5.

Yudell, Michael, Roberts, Dorothy, DeSalle, Rob, and Tishkoff, Sarah. "Taking Race out of Human Genetics." *Science.* 351 (6273): 564-565.

Wednesday   **Data & Information Infrastructure**
Wednesday Reading:
Feed, pp. 1-72
Angwin, et al. 2016. "Machine Learning" Online at https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing
http://www.slate.com/articles/technology/future_tense/2016/02/a_close_look_at_four_government_algorithms_designed_to_stop_waste_and_fraud.html

WEEK NINE

Monday   **Data & Information Infrastructure**
Monday Reading:
Feed, pp. 73-205

Wednesday   **Data & Information Infrastructure**
Wednesday Reading:
No Class / Thanksgiving

WEEK TEN

Monday   **Data & Information Infrastructure**
Monday Reading:
Feed, pp. 205-297

Wednesday
Wednesday Reading:
Schull, Natasha Dow. 2016. "Data For Life: Wearable Technology and the Design of Self-Care."
BioSocieties.

WEEK ELEVEN

Monday   **Data & Information Infrastructure**
Monday Reading:
Kelty et al. 2015. "Seven Dimensions of Contemporary Participation Disentangled." Journal for the Association of Information, Science, and Technology.

Wednesday   **Final Review**
Wednesday Reading:
Sismondo, Sergio. 2008. "Science and Technology Studies and an Engaged Program." The Handbook of Science and Technology Studies.