**SOCI 3380/INTS 4388: Science & Technology in Society**

**Spring 2018**

Instructor: Professor David Arditi

Meets COBA 140

M/W/F 1:00pm-1:50pm

contact information

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Description of Course Content

While we often discuss what technology and science do for people, we often forget to talk about the social relations that produce science and technology. Furthermore, we spend more time making scientific fact controversial than we spend discussing what seems to be the uncontroversial application of science and technology in everyday life. This course will explore the social relations that underpin the creation and deployment of science and technology. The construction of scientific knowledge can be analyzed as a social process and the products themselves as social entities.

This course introduces students to the complex relationship between society, and science and technology. Students will learn historical perspectives on the production and deployment of scientific knowledge. The course will use a critical approach to examine the social, cultural, and ethical impact of scientific and technological developments. It will also discuss the role of democracy in the advancement of science and technology.

## Students will demonstrate the ability to:

* examine science and technology through a critical theoretical framework
* situate science and technology within social relations
* recognize the ways in which science and technology are shaped by, and help to shape, society and culture.
* debate how to control science and technology through democratic means

## Textbook and Other Course Materials Requirements

Books for purchase:

* Bauchspies, Wenda K., Jennifer Croissant, and Sal Restivo. 2005. *Science, Technology, and Society: A Sociological Approach*. Malden, MA: Wiley-Blackwell.
* Johnson, Deborah G. and Jameson M. Wetmore, Eds. (2009) *Technology and Society: Building Our Sociotechnical Future* (Cambridge, MA: MIT Press). ISBN 978-0-262-60073-6
* Gusterson, Hugh. 2017. *Drone: Remote Control Warfare*. Reprint edition. Cambridge, Massachusetts London: The MIT Press.
* Other Readings on Blackboard

Grading Policy

The following scale will be applied to both individual assignments and to the course grade as a whole:

**A= 90-100** points. An “A” reflects consistent excellence in the course, strong initiative, and the student’s commitment to their own learning and success.

**B=80-89** points. A “B” reflects work that is consistently above the minimum.

**C=70-79** points. A “C” reflects minimum proficiency in the main objectives of the course needed to proceed to INTS 4391.

**D=60-69** points. A “D” reflects the fact that a student has not mastered material essential for success in INTS 4391 or has not given the instructor a sufficient basis for judgment because of unexcused failure to complete course work.

**F=<60** points. A failing grade will typically reflect missed assignments, academic honesty violations, and/or a lack of engagement with the course.

Grading rubrics will be made available for each assignment and will be posted in electronic form on the Blackboard page for each assignment. Students should consider the rubrics as guidelines for the expectations of the assignment and be aware that their grade will depend on fulfilling the criteria set forward in the rubric.

The student’s grade for the course will be based on the following:

|  |  |
| --- | --- |
| **Assignment** | **Percentage** |
| Midterm Exam | 40 |
| Final Paper | 40 |
| Participation/Quizzes/Assignments | 20 |
| **Total** | **100** |

**Late Work Policy**

This course moves sequentially to build research skills; work cannot be made up late without compromising the research process. Therefore late work is strongly discouraged:

* All due dates on the syllabus are firm and are defined to the minute.
* **Written Assignments may be turned in up to one day after the due date with an automatic 10 point**. Late assignments reduce your margin for error to pass the course.
* **Exceptions may be made when students present documentation of an unforeseeable, significant, and unavoidable situation that prevented their completion of the assignment on time.**

**The Instructor reserves the right to modify assignments with due notice.**

**COURSE CALENDAR—Spring 2018**

\*Note – Reading assignments should be done by the day that they are listed on the syllabus

1/17 Wednesday

* What is STS?
* Review of syllabus, course expectations and design

1/19 Friday

**Understanding Science, Technology and Society**

* Introduction to *Science, Technology, and Society (STS)* (p.1-17)

1/22 Monday

* Chapter 2 – Cultures of Science - *STS* (p.19-47)

1/24 Wednesday

* Chapter 3 – The Dance of Truth – *STS* (p.49-54 62-72)

1/26 Friday

**Technological Determinism**

* Introduction to Part II in *TS* (p.93-95)
* “Do Machines Make History?” – Robert Heilbroner in *TS* (p.97)

1/29 Monday

* “The Social Construction of Facts and Artifacts” – Pinch and Bijker in *TS* (p.107)

1/31 Wednesday

* “Where are the Missing Masses? The Sociology of a Few Mundane Artifacts” – Latour in *TS* (p.151)

2/2 Friday

* “Code is Law” – Lawrence Lessig in *TS* (p.181)

2/5 Monday

* Gary Chapman – “Shaping Technology for the ‘Good Life’” in *TS* (p.445)

2/7 Wednesday

* NO CLASS
* Extra Credit Opportunity – Noon-1pm

2/9 Friday

**Power**

* Chapter 4 – STS and Power in the Postmodern World - *STS* (p.73-101)

2/12 Monday

* “Hegemony” – Raymond Williams (Blackboard)

2/14 Wednesday

Technology Day: Autonomous Vehicles

* The big question about driverless cars no one seems to have an answer to <http://wapo.st/1Vng4XL>
* Save the driver or save the crowd? Scientists wonder how driverless cars will ‘choose’ <http://wapo.st/28RlKaT>
* The technology behind the Tesla crash, explained <http://wapo.st/298FOJI>
* Federal officials plan aggressive approach to driverless cars <http://wapo.st/2cOQZof>
* The next president should make driverless cars a White House priority, group says <http://wapo.st/2enzS00>
* Blind man sets out alone in Google’s driverless car <http://wapo.st/2hJYbEx>
* Boeing tests could clear the way for fully autonomous flights <http://wapo.st/2tL62Ii>
* How safe is ‘safe enough’ to put driverless cars on the nation’s roadways? <http://wapo.st/2ArA8ID>

2/16 Friday

**Mediation**

* “Medium is the Message” - Marshall McLuhan

2/19 Monday

* “On technical Mediation” – Bruno Latour
* “Which politics for which artifacts?” – Bruno Latour

2/21 Wednesday

Technology Day: Monitoring Workers

* Some Swedish workers are getting microchips implanted in their hands <http://wapo.st/2oWYTlA>
* Google Glass 2 – Enterprise edition – Factories - <https://www.theverge.com/2017/7/18/15988258/google-glass-2-enterprise-edition-factories>
* This employee badge knows not only where you are, but whether you are talking to your co-workers <http://wapo.st/2bVdps5>

2/23 Friday

* Midterm

2/26 Monday

**Gender, Race, Religion and STS**

* “The Intersection of Culture, Gender, and Technology” – Patrick Hopkins in *TS* (p.195)
* “The Feminization of Work in the Information Age” – Judy Wajcman in TS (p.459)

2/28 Wednesday

* “Manufacturing Gender in Commercial and Military Cockpit Design” – Rachel Weber in *TS* (p.265)

3/2 Friday

* “Bodies, Machines, and Male Power” – Carme Alemany Gomez in TS (p.389)

3/5 Monday

* “White” – Richard Dyer in *TS* (p.257)
* Physiognomy’s New Clothes (racism in machine learning) – <https://medium.com/@blaisea/physiognomys-new-clothes-f2d4b59fdd6a>
* “‘[A white mask worked better’: why algorithms are not colour blind](https://www.theguardian.com/technology/2017/may/28/joy-buolamwini-when-algorithms-are-racist-facial-recognition-bias?CMP=share_btn_link)” – from the Guardian

3/7 Wednesday

* “Amish Technology: Reinforcing Values and Building Community” – Jameson Wetmore in *TS* (p.297)

3/9 Friday

* **Paper Proposal Due**
* **NO CLASS!**

**\*\*SPRING BREAK – March 12-16\*\***

3/19 Monday

**Democracy**

* Introduction to Part IV in *TS* – “The Complex Nature of Sociotechnical Systems”

3/21 Wednesday

* “Will Small be Beautiful? Making Policies for our Nanotech Future” – Patrick McCray in *TS* (p.323)
* Watch in Class – Climate of Doubt - <http://www.pbs.org/wgbh/frontline/film/climate-of-doubt/>

3/23 Friday

* Stellan Welin – “Reproductive Extogenesis” in TS (p.51)

3/26 Monday

* “People’s Science in Action: The Politics of Protest and Knowledge Brokering in India” – Roopali Phadke in *TS* (p.499)

3/28 Wednesday

* “Questioning Surveillance and Security” – Torin Monahan in *TS* (p.537)

3/30 Friday

Technology Day: Surveillance Technologies

* On the Internet, search queries are used to target vulnerable consumers. <http://www.theatlantic.com/technology/archive/2015/11/google-searches-privacy-danger/413614/>
* These smart TVs were apparently spying on their owners <http://wapo.st/2lcToBD>
* Bose headphones have been spying on their customers, lawsuit claims <http://wapo.st/2o57BCm>
* New type of baby monitors offers ‘peace of mind’ but may deliver just the opposite <http://wapo.st/2pP5oIJ>

4/2 Monday

**Big Data**

* A Critical Reflection of Big Data - <http://journals.uic.edu/ojs/index.php/fm/article/view/4878/3755>

4/4 Wednesday

* Digital Dialectic – David Arditi

4/6 Friday

* First Draft Due
* No Class

4/9 Monday

Technology Day: Algorithms and Artificial Intelligence

* Algorithmic Accountability <https://techcrunch.com/2017/04/30/algorithmic-accountability/>
* Opinion: Algorithmic bias can turn bots into beasts. Tech can help. <https://www.wired.com/2017/02/keep-ai-turning-racist-monster/>
* From Peppa Pig to Trump, the web is shaping us. It’s time we fought back - <https://www.theguardian.com/commentisfree/2017/nov/17/peppa-pig-donald-trump-internet-social-media-algorithms>
* New MIT algorithm rubs shoulders with human intuition in big data analysis <http://wapo.st/1GehtNJ>
* This algorithm can create a new Van Gogh or Picasso in just an hour <http://wapo.st/1OlPz1d>
* Can big data stop bad cops? <http://wapo.st/2baNjw7>
* How artificial intelligence is moving from the lab to your kid’s playroom <http://wapo.st/1Nekzkm>
* New MIT algorithm rubs shoulders with human intuition in big data analysis <http://wapo.st/1GehtNJ>

4/11 Wednesday

**Drones**

* Gusterson – Chapter 1 – “Drones 101”

4/13 Friday

Technology Day: Drones

* FAA records detail hundreds of close calls between airplanes and drones <http://wapo.st/1hsNruo>
* Biggest obstacle for delivery drones isn’t the technology: It’s you and me <http://wapo.st/1Oc9q1P>
* You may be powerless to stop a drone from hovering over your own yard <https://www.washingtonpost.com/news/the-switch/wp/2016/01/13/you-may-be-powerless-to-stop-a-drone-from-hovering-over-your-own-yard/>
* When a beer cooler rolls up to your doorstep, the future has arrived <http://wapo.st/2hU6YUW>
* Who is attacking Russia’s bases in Syria? A new mystery emerges in the war. <http://wapo.st/2CVA0Ce>

4/16 Monday

* Gusterson – Chapter 2 – “War Remixed”

4/18 Wednesday

* No Class
  + Extra Credit Opportunity Noon-1pm

4/20 Friday

* Gusterson – Chapter 3 – “Remote Intimacy”

4/23 Monday

* Gusterson – Chapter 4 – “Casualties”

4/25 Wednesday

* Gusterson – Chapter 5 – “Arsenal of Democracy?”

4/27 Friday

* Gusterson – Chapter 6 – “Conclusion: Peering over the Horizon”

4/30 Monday

**Artificial Intelligence**

* Inside the Artificial Intelligence Revolution – Part One <http://www.rollingstone.com/culture/features/inside-the-artificial-intelligence-revolution-a-special-report-pt-1-20160229>
* Inside the Artificial Intelligence Revolution – Part Two <http://www.rollingstone.com/culture/features/inside-the-artificial-intelligence-revolution-a-special-report-pt-2-20160309>

5/2 Wednesday

**Internet of Things**

* Vincent Mosco – <https://www.policyalternatives.ca/publications/monitor/can-internet-things-be-democratized>
* Smart home device alerts New Mexico authorities to alleged assault <http://abcnews.go.com/US/smart-home-device-alerts-mexico-authorities-alleged-assault/story?id=48470912>
* Why it matters that Google Home can now identify you by voice <http://wapo.st/2pHlGTM>

**May 7, Monday**

**FINAL PAPER DUE by 1:30pm**

## Drop Policy

**Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wweb.uta.edu/aao/fao/>).

Academic Dishonesty

**Academic Integrity:** students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

*I pledge, on my honor, to uphold UT Arlington’s tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*

*I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

Instructors may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents’ Rule* 50101, §2.2, suspected violations of university’s standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student’s suspension or expulsion from the University.

Student Support Services Available:

UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to [resources@uta.edu](mailto:resources@uta.edu), or view the information at [www.uta.edu/resources](http://www.uta.edu/resources).

ADA and Title IX

**Americans with Disabilities Act:** The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability) or by calling the Office for Students with Disabilities at (817) 272-3364.

**Title IX:** The University of Texas at Arlington is committed to upholding U.S. Federal Law “Title IX” such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit [www.uta.edu/titleIX](http://www.uta.edu/titleIX).

E-Culture Policy

**Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

Student Feedback Survey

At the end of each term, students will be asked to complete an online Student Feedback Survey (SFS) about the course and how it was taught. Instructions on how to access the SFS system will be sent directly to students through MavMail approximately 10 days before the end of the term. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback data is required by state law; student participation in the SFS program is voluntary.

Final Review Week

**Final Review Week:** A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures

Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located as discussed in class. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.