

Political Science 4703: Spring 2020
Technology, Society and the Future
Office Hours: Tuesdays 1:00 –4:00
Class meeting: Tu + Thursday 8:00 – 9:15am

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Classroom: Hellums 141

A number of emerging technologies from Robotics to Genetic Engineering, Artificial Intelligence, Social Media and the Internet, to name just a few, are shaping our world in ways unimaginable only a few years ago. In this course, we will look at some of these technological forces and how they impact politics, social relations and economics today. This will not be a science fiction class, but many of the things we will examine can feel almost like science fiction. But rather than future gazing into a world that we cannot imagine, the central goal of this course is to explore how the significant technological changes we are witnessing today are affecting our world today.

This course will be highly interactive and will demand significant student participation and involvement. The centerpiece of the course will be student presentations and projects. We will begin with some basic introductions into some of the incredible technological advances that are reshaping our world (for example, Artificial Intelligence, Robotics, Social Media, Internet-Interconnectivity, etc.). We explore how these technological forces are shaping and reshaping the world around us including things like education, communication, medicine, international development, international relations, work, social life, politics, elections and democracy.

The second part of this course will be dominated by student/group presentations. In the current educational parlance, we will have a “flipped” classroom: Instead of the professor providing you with information that you will try to remember for a test, we will collectively delve into a whole series of issues and questions. In a very real sense, we will be teaching each other. Groups of students will focus on particular fields or subjects that interest them (how technology is reshaping medicine, education, agriculture, elections, etc. etc.). We will have several discussions early in the course where we assign groups and pick topics. The idea here will be to allow you to focus on an area of *your* interest. Each group (3 students each?) will meet in and outside of class to prepare presentations. I expect to be flexible about the character and nature of these presentations (and hope to be surprised by them). But the starting point, I expect, should be a brief overview of the particular area of interest, how has technological change shaped this field up to this point and how are the technologies that are currently online or being developed reshaping this part of our world. Finally, what are the implications of these changes for us as citizens, consumers, workers and so forth?

I also expect to take advantage of the significant insights that can be brought to these questions through alternative media and films. We will, as an example, view several episodes of “Black Mirror” together and discuss their insights and implications. To be honest, I think that creative artists are probably better at thinking about where we are going and how our world is changing than political scientists.

Recommended prerequisite: PSCI 2012 or IAFS 1000 – or permission of the professor.

Course Requirements:

Class participation and course presentations are a very significant part of this course. In class participation will count for 5% of the course grade. We will have a mid-term exam and a final exam. The mid-term will count for 20% of the class grade. The final will be inclusive of the entire semester and count for 25% of total grade. The group presentation will count for 25% of the course grade. Students will be evaluated individually and collectively for their group presentations. Each student will also write a 15-page paper on the topic of her or his presentation topic. This paper will count for 25% of the course grade. Student research papers are due at the last class session (May 5).

The mid-term and final exams will consist of short answer questions and an essay question. The essay questions will be handed out in class at least one week before each test. I will give you several questions to study. I will then choose which question or questions the students will write on during the in-class exam.

Group presentations and Research Papers:

Early in the semester, you will choose topics you would like to examine in depth and work in groups to examine the topic and eventually make a presentation to the class on what you've learned. I will discuss these topics with you extensively in advance. Some examples of possible topics include: "Will Robots take our Jobs?" "What is Artificial Intelligence and is it a threat to human kind?" "Genetic Engineering and Super-Humans," "Social Media and Citizenship," "Technology and the Future of Democracy."

The idea is for you to explore a topic that is of special interest to you and allow you to research it in depth with a group. The group will then make a presentation to the class and teach us what you've learned. You will also be responsible to assign readings (or videos) for students to read/watch in preparation for your class session. We will have several class sessions early in the semester devoted to building groups and defining projects. I also expect all groups to meet with me individually, both during class and during my office hours (or by appointment) to discuss their presentation plans. The group presentations will be worth 25% of your individual grade. I will ask each of you to privately send me an evaluation of the other members of your group discussion their contribution to the group project. I will use these evaluations when considering the individual's grade for the project.

For the written research paper, students will write on the topic of particular interest for them in their own future careers. Each student will then write a paper on how technology is shaping, or reshaping, an area of employment or industry. I am specifically hoping you will write a paper on the field that **you** hope to enter after college. For example, how will technologies being developed today reshape the *Legal Profession*, or *Health Care*, or *Agriculture*, or *Publishing*, or *Media*, or *Journalism*, or *Military/Defense*, or *Business (Marketing, Management, etc.)* or *Politics*? Etc, Etc. Each student must meet with me individually to have his/her project approved and to discuss the direction of this research.

If several students are interested in researching a particular field (say, for example, News/Journalism), it is possible that they could join together with each other and make a joint presentation (see above).

This research paper should be approximately 15 pages and include an extensive bibliography and citations. Papers are due the last class session (May 5).

Class Participation:	10%
Mid-term exam	20%
Final Exam:	20%
Class Presentation:	25%
Research Paper:	25%

Readings:

(Note: Some readings will be posted on the class web site. *All readings are subject to change as we move through the semester. Please check class CALENDAR on our class Canvas website weekly for current reading assignments*).

There are two required texts ordered for the class (available in the bookstore):

- Alec Ross, *Industries of the Future*, Simon and Schuster, 2017
- Klaus Schwab, *Shaping the Fourth Industrial Revolution*, WEF, 2018.

In addition to these texts we will have assigned readings drawn from internet and open access sources which will be added to the course schedule as the semester progresses. These will be linked to the course syllabus on line. There will also be reading assignments directed by the student groups making presentations each week.

The majority of the required readings for this class will be found on line and in these books. In order to bring other perspectives to the class readings and/or to cover materials not found in these books, readings that can be accessed through the class CANVAS site. To access these readings, go to the class CANVAS web site and click on the Daily Calendar.

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SEP:

Weekly Schedule:

Week 1 (January 14, 16) - Introductions and Orientation

Reading: *Industries of the Future*, Introduction. pp. 1-14.

Homework: Watch the Frontline video “Generation Like”

<https://www.pbs.org/video/frontline-generation/>

Week 2

September (January 21, 23) - Social Media and Society? What are we becoming?

On Tuesday, we will watch the “**Black Mirror**” episode, *Nosedive*.

Readings:

Have Smart Phones Ruined a Generation? by **JEAN M. TWENGE**, *THE ATLANTIC MAGAZINE*:

<https://www.theatlantic.com/magazine/archive/2017/09/has-the-smartphone-destroyed-a-generation/534198/>

Schwab: Chapter 12, Neuro-technologies

Week 3 (January 28, 30) - --Robots

Readings:

Ross: *Industries of the Future, Chapter 1, Here Come the Robots*” pp. 15-43 and Chapter 2 “*The Future of the Human Machine*” pp. 44-76.

Foreign Affairs: The Revolution in Military Affairs, June 2019, (see Canvas)

Week 4 (February 4, 6) Artificial Intelligence vs. Human Intelligence?

Reading:

Schwab: Chapter 8: Artificial Intelligence and Robotics

[Rouhiainen on Artificial Intelligence.docm](#)

"How Artificial Intelligence will re-wire us" The Atlantic, April 2019.

<https://www.theatlantic.com/magazine/archive/2019/04/robots-human-relationships/583204/> (*Links to an external site.*)

Read also the following short articles: <https://www.livescience.com/62656-when-will-ai-be-conscious.html> (*Links to an external site.*)

<https://www.wired.com/story/will-ai-achieve-consciousness-wrong-question/> (*Links to an external site.*)

<https://www.frontiersin.org/articles/10.3389/fpsyg.2019.01535/full>

Week 5 (February 11, 13) Big Data

Readings: Industries of the Future, Big Data Ch. 5, pp. 152-186.

Schwab: Chapter 7: The Internet of Things

Group work/planning sessions

Week 6 (February 18, 20) Politics and Democracy in the Age of the Internet

Readings:

Industries of the Future, Ch. 4, pp. 121 – 151.

New York Times Article, Chaos is the Point.

<https://www.nytimes.com/2020/01/10/us/politics/russia-hacking-disinformation-election.html?smid=nytcore-ios-share>

Karin Petersson, "Politics in the Age of the Internet" <https://www.socialeurope.eu/politics-in-the-age-of-data>

New York Times Article: The Surveillance State, April 24, 2019.

<https://www.nytimes.com/2019/04/24/technology/ecuador-surveillance-cameras-police-government.html>

Week 7 (February 25, 27) Medicine, Health and Genetic Engineering.

Readings:

Schwab: Chapter 11 -Biotechnologies

Also See Canvass web site Calendar

Group work/planning sessions

Week 8 (March 3, 5) –

The Future of Work

Reading: Industries of the Future, Ch. 6, Geography of Future of Markets, 186-240.

Planning sessions/presentations

Week 9 (March 17) An Introduction to Quantum Mechanics

Read:

<https://www.newscientist.com/article/2217347-google-claims-it-has-finally-reached-quantum-supremacy/> (Links to an external site.)

<https://www.quantamagazine.org/john-preskill-explains-quantum-supremacy-20191002/> (Links to an external site.)

<http://www.bbc.com/earth/story/2>

March 19 --Mid-term Exam

Week 10 (March 24, 26) Spring Break

Week 11 (March 31, April 2)

Group presentations

Readings: TBA

Week 12 (April 7, 9)

Group presentations

Readings: TBA

Week 13 (April 14, 16)

Group Presentations

Readings: TBA

Week 15 (April 21,) (April 23, no class meeting)

Group Presentation

Readings: TBA

Week 16 (April 28, 30) Conclusions – What do YOU do from here?

Reading: Industries of the Future, Conclusion, pp. 140-150

Research Essays due in class April 30.

Class Final --- Saturday, May 2, 7:30 p.m.– 10:00 p.m.

Accommodation for Disabilities

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#) (www.colorado.edu/disabilityservices/students). Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition or injury, see [Temporary Medical Conditions](#) under the Students tab on the Disability Services website and discuss your needs with your professor.

Religious Holidays

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, *{{insert your procedures here}}*

See the [campus policy regarding religious observances](#) for full details.

Classroom Behavior

Faculty and students should be aware of the campus [Classroom and Course-Related Behavior policy](#) which describes examples of unacceptable classroom behavior and provides information on how to handle such circumstances should they arise. Faculty are encouraged to address the issue of classroom behavior in the syllabus, and to understand their [professional rights and duties](#).

Classroom behavior

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make

appropriate changes to my records. For more information, see the policies on [classroom behavior](#) and the [Student Code of Conduct](#).

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

The University of Colorado Boulder (CU Boulder) is committed to maintaining a positive learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct, discrimination, harassment or related retaliation against or by any employee or student. CU's Sexual Misconduct Policy prohibits sexual assault, sexual exploitation, sexual harassment, intimate partner abuse (dating or domestic violence), stalking or related retaliation. CU Boulder's Discrimination and Harassment Policy prohibits discrimination, harassment or related retaliation based on race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Individuals who believe they have been subject to misconduct under either policy should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127. Information about the OIEC, the above referenced policies, and the campus resources available to assist individuals regarding sexual misconduct, discrimination, harassment or related retaliation can be found at the [OIEC website](#).

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to [the academic integrity policy](#). Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, resubmission, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code Council (honor@colorado.edu; 303-735-2273). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code Council as well as academic sanctions from the faculty member. Additional information regarding the academic integrity policy can be found at the [Honor Code Office website](#).