Fall 2020 Syllabus

CPS 403: Computers and Society
CPS 603: Computers and Society[1]

Tues-Thurs 8:00-9:35am, MAC 211 (in MacDonald Hall)

(This was the live version. Now the course is finished, and it is complete.)

Course web site: Canvas site for CPS 403

Professor

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Office hours: MWF 9:15-10:15am, TR 2-3:30pm and by appointment at https://russtuck.youcanbook.me/**.** Or drop in when my door is open. To visit my regular office hours by Zoom without an appointment, use the link in the "schedule" section of https://360.gordon.edu/profile/Russ.Tuck (click "Show the Schedule). If I'm not there, text my mobile number above. (I might be in an appointment meeting.)

Purpose

Men have become the tools of their tools.
- H. D. Thoreau, 1854

Computers have enabled remarkable changes in human society in the last 50 years. Computers are all around us, both visibly in our hands and driving myriad web services, and also less visibly, reshaping cars, factories, hospitals, and how businesses and other organizations function. The world is in some ways dramatically different as a result. Computers are fundamentally tools, which can be used in myriad ways. As computer scientists, we are often tool builders, and we need to consider carefully both the intended and the unintended effects of what we build.

But our impact can be much broader than what we build, because we also influence who else is building tools. By encouraging or discouraging diversity in our field and in our organizations, we influence who is solving problems with computers. Since people solve problems best when they understand them deeply and care about them passionately, this profoundly impacts whose problems are being solved. So our impact on the diversity within computer science is an awesome responsibility, which we must take seriously.

The computer science curriculum of Gordon College challenges students to wrestle with important issues related to the impact of computing on individuals and on society. Indeed, these

[1] CPS 603 is a graduate version of CPS 403, offered as part of the Masters of Education in Digital Literacy and Computer Science (M.Ed. in DLCS).

topics are a key component from the very earliest courses through the end of our curriculum. This course includes a short systematic overview of ethical frameworks, as an aid to both thinking and communicating about ethical issues. And because it is too easy to (incorrectly) reduce ethics to "what is the right thing for me to do", we will focus particularly on justice, a key focus of societal ethics. Throughout, we will seek to understand how the Bible and Christian faith can inform and direct our thoughts, words, and actions.

Racial injustice is one of the most persistent problems in the US, and it is also the focus of much current attention. We will first seek to understand it, which is challenging, and then to consider how computers and computer scientists have interacted with this problem, and how we can contribute to its solution. Gender bias is another persistent problem, which we will also study.

We will also study, discuss and potentially act upon several other major areas of computer science with important ethical questions and societal impact, including big data, machine learning, surveillance, habit-building products, and personal technology. In some cases, we will think futuristically as we project ourselves into the computer impact issues of tomorrow. In the process, we will become more aware of the possible negative impacts that computer technology might bring to individuals, groups, and society as a whole.

Finally, we will move toward actually doing something about these issues both now, as students, and later as professionals and consumers.

This course teaches important parts of the 2016 Massachusetts Digital LIteracy and Computer Science (DLCS) Curriculum Framework. The section "DLCS Curriculum Map" lists those parts and describes how they are taught and assessed.

Catalog Description

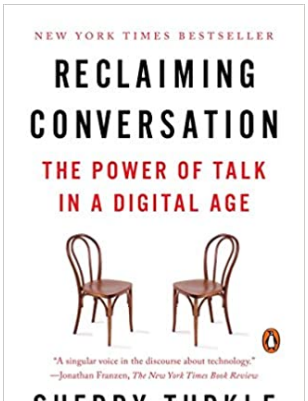
Uses and impact of computers in modern society; considers ethical and moral issues in context of Christian worldview. Nontechnical; open to all students. Students will engage in a significant social impact project during the course.

Prerequisite: Junior or senior standing or permission of instructor.

Acknowledgement

This course was originally developed by Prof. Irv Levy, and still mostly reflects his work.

Required Texts



- ***Reclaiming Conversation: The Power of Talk in a Digital Age***, Sherry Turkle (Penguin Books; Reprint edition, October 4, 2016), ISBN-13: 978-0143109792, ISBN-10: 0143109790.
- ***1984***, George Orwell (1949)

- Either *Down and Out in the Magic Kingdom*, Cory Doctorow (2003) *or* ***The Naked Sun***, Isaac Asimov (1957)
- *Erewhon* (excerpts), Samuel Butler
- *Walden* (excerpts), Henry David Thoreau
- There will also be books to read that you choose from a list or propose and get approved.

Course Structure

The class will normally be conducted in a seminar/discussion format. Attendance at all classes is required and students are expected to be prepared and actively involved in the discussion. This class is NOT a lecture class. It is a discussion group. You will be far more actively involved than in a normal lecture class. If the class is larger than ideal for a discussion group, you will be divided into small groups that will change daily. Each member of the group is expected to be actively involved in the small group discussion. Each class meeting different individuals will be tasked to report back to the class about the conversations of their group.

Peer leadership is essential in this course. Students will be asked to lead small group and class discussion on occasion during the semester. It is expected that discussion leaders will come prepared to elicit feedback and to promote discussion of the day's topic.

Many readings will be required for this course. For the longer readings, particularly whole books, it is wise to ook ahead and give yourself at least a week or two to read them. Short readings are best read a day or two before class, so they are fresh in your mind when we discuss them. There are also some supplemental (or optional) readings, to help you explore topics you find particularly interesting. **In order to ensure that students complete the reading assignments, there will generally either be a short written assignment (a response or questions) due at the start of class, or a brief quiz taken at the start of class.** There is no make-up quiz or late credit provision, since the point is to be ready for discussion, so it is important to arrive for class on time and with any reading-related assignment already submitted.

Computers and Society is a dynamic field, with new capabilities and new social implications appearing regularly. During this semester it is possible that a new engaging topic will emerge that we will chose to discuss rather than the ones listed in the syllabus. Furthermore, our study of justice will be enriched by including guest experts as they are available, so our schedule will adjust if needed to accommodate their schedules. Finally, while the course has been taught many times, this is my first time, and I expect that I will learn and adjust as we go. So EXPECT that the syllabus may change as the course progresses.

The college has adopted the following statement regarding work expectations for courses; "For each semester hour of credit, students should expect to spend a minimum of 2-3 hours per week outside of class in engaged academic time. This time includes reading, writing, studying, completing assignments, lab work, or group projects, among other activities." That is 8-12 hours of work per week for undergraduates, split between per-class readings and longer term assignments.

Book Reports

In addition to many required and optional reading selections that will be assigned, each student will write two book reports. In each case, each student will select a book, get the professor's approval, read it, and write a book review of roughly two to three pages. The review should carefully describe the overall concept of the book, the political or philosophical bias of the author, the intended audience, the content of the book (on a chapter to chapter basis), and a personal opinion regarding the value of the book for others in our course. Additionally, the reviewer should clearly note any controversial opinions that the author might raise and note her or his own Christian perspective on the controversy. For more information see this link.

Each student will give a brief (approximately 5 minute) presentation to the class after the review is completed. A guiding question for preparing your presentation can be: "what should the class learn from this book?" Please end with an open-ended question for the class to discuss. The book review presentation will be self-evaluated, peer-evaluated, and evaluated by the professor.

Relevant book lists will be provided by the professor; however, other options will be considered.

Off-Campus Experiences

COVID-19 note: off-campus class activities won't be scheduled until it is considered wise and safe. But we might find creative virtual alternatives. If you have ideas, please tell me.

During the semester, as appropriate, off-campus activities will be arranged. For example we might visit the MIT Museum, attend a relevant lecture at Harvard or MIT, or go as a class to see a film screening. If an off-campus visit is scheduled, it is considered a mandatory class event unless specifically stated otherwise. Missing an off-campus event without permission is treated as an unexcused absence.

Social Impact Project

It is a premise of this assignment that knowledge should lead to action. Accordingly, students in this course will be expected to devote a significant amount of time to a project that will either be of direct social benefit to its target audience or that will expose others to some of the concepts that we discuss.

Teams consisting of 3-4 students will be formed early in the course. These teams will be required to submit a proposal for a social impact/computer ethics project that will benefit the class, the department, the campus or the larger community. Numerous examples are provided; however, these are meant to be illustrative and not exhaustive.

Since the project will require a substantial amount of time, each student should select a project that she or he finds personally interesting. The suggestions below are illustrative of the types of project that are desired; however, students may suggest alternatives as long as they are consistent with the goals of the course and are approved by the instructor in advance. Each

project will terminate with a class presentation (15 minutes) as well as submission of all supporting documentation.

Examples:

- Service and outreach, for example:
    - Create and engaging introduction to computer science for high school students and their parents, targetted particularly to reach groups under-represented in computer science, and present it to the target audience at a church or school
    - Start a Girls Who Code club, or plan a Girls Who Code Summer Immersion Program
    - Facilitate short term technology missions for future students
    - Develop Lego Mindstorms Robotics club for Lynn high schools
    - Develop after-school computer science enrichment program for Lynn or similar school system
- Create alternate chapel option, for example:
    - Organize a debate
    - Bring a speaker to campus on a relevant topic.
      Past examples include women in computing and singularitarians
    - Host a themed film series
    - Stage a dramatic presentation, *e.g.* R.U.R.
- Articles accepted for publication in Tartan, for example:
    - Diversity's value in Computer Science
    - Bitcoin explained
    - Big data
    - Assange and Snowden, Heroes or Villains?
- Create display case resource in public places on campus
- Propose a "Human Centered Computing" program for Gordon, with convincing data and reasoning for what it should contain and why. (See if there's data to support the idea that this would help attract a more diverse group of students.)
- Set of articles for publication in *The Tartan*
- Other creative ideas suggested by your team and approved by the professor

Reflection

Update: The final reflection paper is optional, and can add up to 5% to your final grade.
~~Twice~~ Once during the semester, you will write a 2-page reflection paper, answering the following questions.

- What did you learn that's most important? Why is it important? (This should typically be about half the paper.)
- What surprised you?
- What upset you?
- What encouraged you?
- What would you like to do differently as a result of what you've learned?

Grading will be about the depth and clarity of the ideas and responses expressed. Keeping a private journal with notes about these topics will make this easier to write, and help improve the quality.

Grading Criteria

This class has no formal examinations, thus, grading will be much more subjective than in other classes in the computer science curriculum. Some written assignments will be evaluated both by a peer and by the professor. Class presentations will also be evaluated by peers (the entire class) and by the professor. The social impact project will be subject to self-evaluation, peer-evaluation (entire class) and evaluation by the professor. In all evaluations, the professor reserves the right to disregard peer-evaluation or self-evaluation if it is deemed necessary.

Students who discover relevant web resources that relate to our course should send the links and a brief description to the professor. The professor may choose to add those links into the course syllabus. In such a case whuffie points will be distributed to the student. Note that whuffie points only affect your self-esteem, not your course grade.

Grades will be based on weighted evaluation, as follows:

25% — Class preparation assignments and quizzes
5% — Class Discussion Leadership (this might change)
25% — Book Reports
20% — Reflections - Update: Only one so 11% (everything else grows a little)
2nd update: optional, adding up to 5% to final grade.
25% — Social Impact Project

With the exception of the quiz scores, the grades in the course are subjective. A grade will be assigned for a given activity on the following general basis:

A ... work is beyond expectation, surprisingly high quality
B ... all expectations were fulfilled with high quality results
C ... most expectations were fulfilled with average or better quality
D ... few of the expectations were fulfilled with average or better quality
F ... work is missing or is of significantly low quality

General information

Timely and regular class attendance is critical in a discussion-oriented course such as this. Accordingly, attendance and useful class participation can have a large impact on the course grade. There are no excused absences from the class. Arrival at the class more than 10 minutes late is considered an "administrative absence." Many classes have significant advance reading assignments. Preparation for class will be assessed by a brief quiz related to the required reading.

CAUTION: The final course grade will be reduced by 2% for each class missed for students who are absent (or unprepared) for four or more class sessions.

Guided Study note: each of our classes counts for 3, so 6% if more than one.

Accommodations for Students with Disabilities

Our academic community is committed to providing access to a Gordon education for students with disabilities. A student with a disability who intends to request academic accommodations should follow this procedure:

1. Meet with a staff person from the Academic Success Center (ASC) and provide them with current documentation of the disability.
2. Obtain a Faculty Notification Form from the Academic Support Center, listing appropriate accommodations.
3. Submit this form to professors and discuss those accommodations with them, ideally within the first two weeks of classes.

Some accommodations need more time to arrange so communicating early in the semester is important. For more information consult the Academic Success Center webpage: https://www.gordon.edu/asc or email asc@gordon.edu.

Class-Selected Topic

Some time has been reserved for an additional topic of particular interesting to the class.

Course Schedule (subject to change)

#	Date	Topic(s), Readings, and Assignments
1	R 8/20	**Introduction; Syllabus; Discussion**. (slides)
2	T 8/25	**Ethical Theory** (slides) Read: ● Gedney, Ethical Theory ● Moor, Just Consequentialism and Computing ● ACM, Code of Ethics
3	R 8/27	**Applying Ethical Theory** (activity based on Aug. 2018 CACM) (slides) Read: ● "Here-and-Now" by Ken Liu ● "Chili's Has Installed More Than 45,000 Tablets in Its Restaurants" in The Atlantic, June 16, 2014 ● "An Invisible Rating System At Your Favorite Chain Restaurant Is Costing Your Server" in BuzzFeed News, June 21, 2018
4	T 9/1	**What is "White"?** (slides) Read and watch: ● Postmortem Culture: Learning from Failure (chapter 15 in *Site Reliability Engineering: How Google Runs Production Systems*) ● Daniel Hill, Author of 'White Awake' (2:53)

		• Daniel Hill's Message | Racial Reconciliation Conference 2017 (35:00) • Dr. Robin DiAngelo discusses 'White Fragility' (1:23:30) Optional: • "The Beginner's Creed" by Peter Denning, in Communications of the ACM, July 2017, pp. 30-31

5	R 9/3	**Christians and the History of Racism** (slides)
		Three options, the first is shortest. Either
		• Watch these talks
		  ○ The Color of Compromise with Jemar Tisby (45:10)
		  ○ The Color of Compromise with Jemar Tisby | Conversational Q&R Interview (54:03)
		or
		• Read the book
		  ○ The Color of Compromise: The Truth about the American Church's Complicity in Racism, by Jemar Tisby
		or
		• Watch the video series
		  ○ Watch The Color of Compromise | Prime Video

6	T 9/8	**Just Mercy** (slides) • Watch the movie Just Mercy (2019) ○ or read the book Just Mercy by Bryan Stevenson (2015) • Watch this talk, Grace, Justice, & Mercy: an Evening with Bryan Stevenson and Tim Keller 4 volunteers: Book report presentations and discussion
7	R 9/10	**Special Guest: Dr. Nicholas Rowe, Assoc. VP for Student and Global Engagement, and Assoc. Professor of History** (slides) **History: How Demographics and Policy Interact** Read: • The Role of Highways in American Poverty Book report presentations and discussion
8	T 9/15	**Special guest: Dr. Ivy George, Professor of Sociology** (slides) Optional readings: • We're All Socially Awkward Now (before) • My American Pilgrimage: I Write of What I Cannot Speak • The Ominous Black Body (after) Book report presentations and discussion; ~~Discuss choice of class-selected topic~~ Propose Social Impact Project and Team
	R 9/17	*Reading Day - No Classes* *(Start reading "1984" or "Reclaiming Conversation")*

9	T 9/22	Discuss choice of class-selected topic; Book report presentations and discussion; (slides) (Start Social Impact Project) **A Christian Response to Racial Injustice** *Read, listen to, or watch, taking notes for a future discussion:* ● "Letter from a Birmingham Jail" by Dr. Martin Luther King, Jr. ● One of these 2 ○ God Roars, sermon by Pastor Bobby Warrenburg, March 1, 2020, at North Shore Community Baptist Church (downloaded from https://nscbc.org/sermons/, series "One Day") ○ Tony Evans: America's racial crisis is a result of the failure of the church to deal with racism ● Excerpts from **Racism Without Racists** by Eduardo Bonilla-Silva ● Excerpts from **Divided by Faith** by Michael Emerson ● Optional: ○ Statement from Former US President Jimmy Carter ○ Duke coach Mike Krzyzewski pleads with nation to 'choose harder right' in fight against racism, or watch the embedded video (2:46) ■ "choose the harder right instead of the easier wrong." - US Army Cadet Prayer ○ The Ominous Black Body by Dr. Ivy George
10	R 9/24	**Special Guest: Bil Mooney-McCoy, Director of Worship** (slides) **Being Black in America;** **Effects of Racial Injustice** *Read, listen to, or watch each of these:* ● Let's Talk: Hard Stories and Honest Questions (starts at 4:00, 95 min) ○ Calling in white, Bil Mooney-McCoy, Boston Globe, 6/3/20 ● Caleb McCoy - Christian rap/hip-hop ○ Blindspots ○ The Resistance (4 parts) ● Lecrae - All Things Work Together - Short Film (6:26) ○ Optional: Facts About Lecrae by Truth's Table ● Ida B. Wells: Either watch (4:49) or read ○ Optional additional info: Ida B. Wells - Wikipedia ● Billie Holiday - "Strange Fruit" Live 1959 [Reelin' In The Years Archives] (3:18) ● Stages of Cultural Competence - read an excerpt from When Twice as Good Isn't Enough | Proceedings of the 51st ACM Technical Symposium on Computer Science Education (SIGCSE 2020) ○ (The excerpt is in Canvas, in the discussion instructions.) ● Optional: ○ How The WNBA Paved The Way For The NBA Strike : Code Switch ○ The Death of George Floyd, in Context ○ Who Gets to Be Afraid in America? (about Ahmaud Arbery)

11	T 9/29	Book Reports (slides)
12	R 10/1	**Decline of Women's Representation in Computer Science** (slides) *Read*: ● Programmed inequality : how Britain discarded women technologists and lost its edge in computing - Read the Introduction, p. 1-18 (This is included in amazon.com's "look inside the book" sample. There is also 1 physical copy in the workstation lab: for safety, disinfect your hands before and after touching it.) ● When Women Stopped Coding ○ Optional: Unlocking the Clubhouse: The Carnegie Mellon Experience ○ Optional: The Secret History of Women in Coding ○ Decoding Femininity in Computer Science in India - article is optional, but short excerpts in Canvas are required ● How Slack Got Ahead in Diversity ● 30 Ways to Be an Ally for Women in Tech in 2020 ● Girls Who Code
13	T 10/6	Social Impact Project Plan (slides) ● Submit a report in Canvas, and briefly present it in class. The report should cover: ○ Planned outcome ○ Detailed plan of work needed to accomplish the outcome ○ Time line - when each thing should be done ○ Dependencies: list of what's needed from other groups or sources; everything in this list should also be in the work plan and time line. The timeline might be the best basis for the presentation. **Ethical Hazards of Machine Learning (and self-driving cars)** *Read:* ● Ethics of Technology Needs More Political Philosophy, Johannes Himmelreich, Communications of the ACM, Jan. 2020, pp. 33-35. ● Machine learning - battling bias, potential uses ○ "Review: Weapons of Math Destruction," Evelyn Lamb, Scientific American Blog, Aug. 31, 2016. ○ "Malevolent Machine Learning," Chris Edwards, Communications of the ACM, Dec. 2019, pp. 13-15. ● Self-Driving Cars - Ethics and Challenges ○ "The Ethics of Accident-Algorithms for Self-Driving Cars: an Applied Trolley Problem?," Sven Nyholm and Jilles Smids, Ethical Theory and Moral Practice, vol. 19, pp.1275-1289 (July 28, 2016). ■ Optional: "Is The Trolley Problem Derailing The Ethics Of Self-driving Cars?", Jack Denton, Pacific Standard, Nov. 29, 2018.

		■ Optional: "Self-driving Car Dilemmas Reveal That Moral Choices Are Not Universal", Amy Maxmen, Nature, Oct. 24, 2018. ○ "It's 2020. Where are our self-driving cars?", Kelsey Piper, Vox.com, Feb. 14, 2020 ○ One of these: ■ "Hailing a Driverless Ride in a Waymo," Ed Niedermeyer, TechCrunch.com, Nov. 1, 2019 ■ "Why Waymo's Fleet of Self-Driving Cars Is Finally Ready for Prime Time," Tom Vanderbilt, Smithsonian Magazine, December 2019 ■ "UPS Teams Up With Waymo To Test Self-driving Delivery Vans," Matt McFarland, CNN Business, Jan. 29, 2020
14	R 10/8	**Hactivism** (slides) *Watch and read:* ● Edward Snowden: Live From Russia, Institute of Politics Speakers Series, The University of Chicago, May 12, 2016 (1:13 run time) (Optional background: https://citizenfourfilm.com/ or the movie Snowden (2016).) ● Before Snowden: Whistleblowers Who Tried to Lift the Veil ● Don't Pardon Edward Snowden ● Optional: ○ What is a Hactivist? ○ Hacktivism: Civil Disobedience or Cyber Crime? ○ Hacker Exposes Rape, Faces Longer Sentence Than Rapists ■ (Followup after sentencing) ○ Best Hacks by the Hacktivist Group 'Anonymous' ○ Isis losing ground in online war against hackers … Update: ○ What did Snowden "leak"? ● The 10 Biggest Revelations From Edward Snowden's Leaks ● Exclusive: Secret contract tied NSA and security industry pioneer ○ What is PRISM? ■ See How PRISM May Work — in This Infographic ~~Mid-term reflection paper due~~
15	T 10/13	Propose book for book report 2 **Women in Computer Science** Special guests: Christine Frandsen '18 and Stephanie Powers '17 (slides) *Read and watch:*

		• What women in science need — mentoring — and why it is so rarely found
		• Impostor Syndrome in Computer Science
		• The sexist Barbie book about women in tech proves we deserve better
		• Discrimination and harassment (pick one)
		  ○ Macho 'brogrammer' culture still nudging women out of tech
		  ○ Tech industry's toxic masculinity problem: Inside the Valley of the Bros
		• Micro-aggressions (pick an option)
		  ○ What is a microaggression? 14 offensive phrases to avoid saying
		  ○ 5 Examples of Microaggressions in the Workplace and What to Do When You Encounter Sexism at Work: Micro-Inclusions
		  ○ (option for women only - anyone can read it, but men must read one of the others, too) When and How to Respond to Microaggressions
		• Joy Buolamwini: How I'm fighting bias in algorithms | TED Talk (8:36)
		• AI, Ain't I A Woman? - Joy Buolamwini (3:32)
		• Sexism (pick one)
		  ○ Why Is Silicon Valley So Awful to Women?
		  ○ The Adorkable Misogyny of The Big Bang Theory (21:09)
		• Optional:
		  ○ How I switched careers to become successful in tech
		  ○ Too often, neurodiverse hiring efforts overlook women
		  ■ Thriving, Not Just Surviving as a Female STEM Major with ADHD: A Quantitative Analysis of Cumulative GPA
		  ○ 'Horror stories' from women inside the tech industry
		  ○ Yes, "algorithms" can be biased. Here's why
		  ■ A Tutorial on Fairness in Machine Learning | by Ziyuan Zhong
		  ○ The Complicity of Geek Masculinity on the Big Bang Theory (20:01)

16	R 10/15	Class-selected topics: Deep Fakes; Working Conditions (slides) *Read as noted below:* **Deep Fakes** "As computer hardware becomes more powerful and advances in machine learning bring people closer to creating indistinguishable imitations of real people or events, what are the ethical implication of this? If technology reaches the point that we cannot distinguish what is real from what is computer generated, then how do we know what to trust or how do we get news without being manipulated? Think about how this not only presents a problem when it comes to the news we watch on TV or online, but also how this would endanger the credibility of video evidence in court trials. Is there anything we

		can do to combat these issues, whether it be high-tech solutions or low-tech solutions?" ● Deepfake videos: Inside the Pentagon's race against disinformation (CNN, Jan. 2019) ● Deepfakes: Is This Video Even Real? | NYT Opinion (New York Times, Aug. 2019) (3:38) ● Optional: ○ Deepfake videos: How and why they work — and what is at risk (CSO, Apr. 2019) ○ Will Deepfakes Do Deep Damage? (Communications of the ACM, Jan. 2020) ● A Decade of Social Bot Detection, Communications of the ACM, Oct. 2020 **Working Conditions** "We should talk about Work Conditions for computer scientists- how to deal with fry-eye, bad posture, the stress from unrealistic expectations of customers or even higher ups. We should learn about companies that have the best practices for dealing with these things. It would help us all take care of ourselves and do our job better because we will feel better. They [are] also things I personally struggle with so I would love to know how to face them in the professional world." ● Office ergonomics: Your how-to guide (Mayo Clinic) ● Managing workplace stress (professor's advice) ● Diverse Co-workers (professor's advice)
17	T 10/20	**Big Data and Surveillance** (slides) *Read and watch:* ● US Constitution, Amendments 1 & 4 ● Two of these: ○ London Police Are Taking Surveillance to a Whole New Level, New York Times, Jan. 24, 2020. ■ Background information: an early test of this technology was challenged in court, and the court ruling has a long and careful discussion of the issues. The system discussed in that ruling was set up to look for about 1000 people who were wanted for arrest or were suspected of a crime, and no data was kept beyond 30 days on anyone else. ○ "New York Police Are Using Covert Cellphone Trackers, Civil Liberties Group Says," Joseph Goldstein, New York Times, Feb. 11, 2016 ○ How the Police Use Facial Recognition, and Where It Falls Short, New York Times, Jan. 12, 2020 ○ Tech companies are still selling facial recognition tools to the police, CNN, July 3, 2020 ○ Defund Facial Recognition Before It's Too Late, The Atlantic, July 5, 2020

		• One of these:
		  ○ 'The Entire System Is Designed to Suppress Us.' What the Chinese Surveillance State Means for the Rest of the World, Time, Nov. 21, 2019
		  ○ A Surveillance Net Blankets China's Cities, Giving Police Vast Powers, New York Times, Dec. 17, 2019
		• The Terrifying Cost of "Free" Websites | Adam Ruins Everything (6:20)

18	R 10/22	Diversity in Computer Science, and Toward Racial Justice (slides)
		Read (see details in assignment):
		• Shalom Statement, Gordon College
		• Diversity in CS
		  ○ 5 eye-opening statistics about minorities in tech
		  ■ Optional (similar to above): Why Diversity Matters in Tech (Forbes)
		  ■ Optional (data shows some progress, but a long way to go): Making progress on diversity and inclusion
		  ■ Optional (some encouraging individuals): One Secret Behind Google's Massive Success: Its Diversity
		  ○ We Don't Want To Assimilate, We Want Respect.
		  ○ Excerpts from *Cracking the Digital Ceiling: Women in Computing Around the World*, edited by Carol Frieze and Jeria L. Quesenberry (2020, Cambridge University Press), chapter 1 "An Inegalitarian Paradox: On the Uneven Gendering of Computing Work around the World" by Tiffany Chow and Maria Charles.
		• Towards Racial Justice
		  ○ The Color of Wealth in Boston (just this page; you're not required to read the full report)
		  ○ The 1968 Kerner Commission Got It Right, But Nobody Listened, *Smithsonian Magazine*, 2018 (50 years later)
		  ○ Resurrecting the Promise of 40 Acres: The Imperative of Reparations for Black Americans, by William Darity Jr and A. Kirsten Mullen, June 4, 2020. (Read pages 1-8, plus 2 lines of p.9. The rest of the report is optional.)
		  ○ Excerpts From Enforcers to Guardians: A Public Health Primer on Ending Policy Violence, by Hannah L.F. Cooper and Mindy Thopmson Fullilove, 2019. Specifically, from Chapter 9 A Magic Strategy.

19	T 10/27	*1984,* George Orwell (slides)
20	R 10/29	De-anonymizing Big Data (slides) *Read and come prepared for discussion:*

		• Just the *abstract* of De-anonymizing Web Browsing Data with Social Networks • https://en.wikipedia.org/wiki/Data_anonymization • Researchers spotlight the lie of 'anonymous' data ○ (Here's the full paper it references, Estimating the success of re-identifications in incomplete datasets using generative models, but you don't have to read it.) *There might be a reading quiz.*
	T 11/3	*Day of Prayer - No Classes*
21	R 11/5	Technology and Human Communication (*Reclaiming Conversation*), p. 1-100 (slides)
22	T 11/10	Ethics of Habit-Building Products (slides) *Watch* *either:* • Hooked: Building Habit-Forming Products (29:12) • Hooked for Good: How Habit-Forming Products Improve Lives (particularly from about 9:15 to the end) (25:55, or 16:40 if start at 9:15) If COVID didn't restrict reserve books, I might have assigned parts of *Hooked: How to Build Habit-Forming Products* and *Indistractible: How to Control Your Attention and Choose Your Life* by Nir Eyal. *or*: • The Social Dilemma (Netflix, 1:20:00) *Read* • at least 3 of the 5 Feature articles in AI and Faith Newsletter, Nov. 2020. Note that the perspectives vary widely. ○ Optional: Sin and the Hacker Ethic: The Tragedy of Techno-Utopian Ideology in Cyberspace Business Cultures (expands on one of these articles)
23	R 11/12	Technology and Human Communication (*Reclaiming Conversation*), p. 103-362 (slides)
24	T 11/17	Book report presentations and discussion (slides)
25	R 11/19	Book report presentations and discussion (slides)
26	T 11/24	Book report presentations and discussion (slides)
	R 11/26	*Thanksgiving - No Classes*
27	T 12/1 (remote)	Final reflection paper due (extra credit); (slides) Social Impact Project Presentations (with peer feedback and team feedback)
28	R 12/3 (remote)	Social Impact Project Presentations (with peer feedback and team feedback) (slides)

DLCS Curriculum Mapping

(Coming soon: this section is being revised from to reflect this year's schedule.)

Standard	Description	Teaching & Learning	Assessment
9-12.CAS.b.2	Identify computer-related laws and analyze their impact on digital privacy, security, intellectual property, network access, contracts, and consequences of sexting and harassment.	Hactivism (14), Big Data and Surveillance (17)	Reading response
9-12.CAS.b.3	Discuss the legal and ethical implications associated with malicious hacking and software piracy.	Hactivism (14), student book reports	Reading response
9-12.CAS.c.1	Explain the impact of the digital divide on access to critical information.	Diversity in Computer Science and Toward Racial Justice (18)	In-class discussion
9-12.CAS.c.3	Describe the role that assistive technology can play in people's lives.	Presentation of Social Impact Project on Accessibility	Peer feedback submissions
9-12.CAS.c.5	Analyze the beneficial and harmful effects of computing innovations (e.g., social networking, delivery of news and other public media, intercultural communication).	1984 (19, Ethics of Habit-Building Products (22), Technology and Human Communication (21, 23), Book report	Book report
9-12.CAS.c.7	Identify ways to use technology to support lifelong learning.	Ethics of Habit-Building Products (22), Book report presentation	Peer feedback submissions
9-12.CAS.c.8	Analyze the impact of values and points of view that are presented in media messages (e.g., racial, gender, political).	Women in Computer Science (15)	Reading response
9-12.CAS.c.9	Discuss the social and economic implications associated with malicious hacking, software piracy, and cyber terrorism.	Hactivism (14), Book report presentations	Reading Response

9-12.DTC.b.1	Communicate and publish key ideas and details to a variety of audiences using digital tools and media-rich resources.	Social Impact Project	Social Impact Project
9-12.DTC.b.2	Collaborate on a substantial project with outside experts or others through online digital tools (e.g., science fair project, community service project, capstone project).	Social Impact Project	Social Impact Project
9-12.DTC.c.1-5	Generate, evaluate, and prioritize questions that can be researched through digital resources or tools. Perform advanced searches to locate information and/or design a data-collection approach to gather original data (e.g., qualitative interviews, surveys, prototypes, simulations). Evaluate digital sources needed to solve a given problem (e.g., reliability, point of view, relevancy). Gather, organize, analyze, and synthesize information using a variety of digital tools. Create an artifact that answers a research question, communicates results and conclusions, and cites sources.	Social Impact Project	Social Impact Project
9-12.CT.c.4-5	Analyze a complex data set to answer a question or test a hypothesis (e.g., analyze a large set of weather or financial data to predict future patterns). Identify different problems (e.g., large or multipart problems, problems that need specific expertise, problems that affect many constituents) that can benefit from collaboration when processing and analyzing data to develop new insights and knowledge.	Social Impact Project	Social Impact Project
9-12.CT.e.1-2	Create models and simulations to help formulate, test, and refine hypotheses. Form a model from a hypothesis generated from research and run a simulation to collect and analyze data to test that hypothesis.	(See CPS 522)	(See CPS 522)