

## Course Form for PKU Summer School International 2019

<b>Course Title</b>	The Social Implications of Computing
<b>Teacher</b>	Josh Hug
<b>First day of classes</b>	July 15, 2019
<b>Last day of classes</b>	July 26, 2019
<b>Course Credit</b>	
<b>Course Description</b>	
<b>Objective</b>	
<p>This will be a discussion-intensive course about the social implications of computing. The purpose of this course is to help computer science students make informed and thoughtful choices about their careers, participation in society, and future development activities. Readings and lecture topics are drawn from a range of fields that together seek to describe our contemporary global society: sociology, philosophy, economics, public policy, etc. The course will also provide an understanding of western culture, policy, and government and the way that computing technology affects these issues.</p>	
<b>Pre-requisites /Target audience</b>	
<p>No pre-requisites. Undergraduate and graduate students.</p>	
<b>Proceeding of the Course</b>	
<p>None</p>	
<b>Assignments (essay or other forms)</b>	
<p>Reading, Essays, Peer Grading of Essays, Presentation</p>	
<b>Evaluation Details</b>	
<p>Attendance and Reading: 60% Programming Project: 20% Presentation: 20%</p>	
<b>Text Books and Reading Materials</b>	
<p>No textbooks, but we will utilize a variety of sources. Many of these sources will be western mainstream media news sources, for example: The New York Times, The Washington Post, etc., but we will also use sources like the MIT Press.</p>	
<b>Academic Integrity (If necessary)</b>	

<b>CLASS SCHEDULE</b> (Subject to adjustment)	
Session 1: Jobs and Automation (3 hours)	Date:7/15
<b>【Description of the Session】 (purpose, requirements, class and presentations scheduling, etc.)</b> Discussion of: The dependence of world economies on exponential growth. Automation's role in helping with that growth. Impacts of automation on income and job displacement. The growth of the Asian middle class. The shift from labor to capital heavy corporations. The potential for a better quality of life in a world with heavy automation. Impacts of self-driving cars on human safety and well being.	
<b>【Questions】</b>	
<b>【Readings, Websites or Video Clips】</b>	
<b>【Assignments for this session (if any)】</b>	
Session 2: Income Inequality (3 hours)	Date:7/16
<b>【Description of the Session】 (purpose, requirements, class and presentations scheduling, etc.)</b> Discussion of: The decline in worldwide poverty, especially in China. Wealth inequality in the World and United States (possibly also in China) and its destabilizing effects. The relationship between income and happiness. Philanthropy by technology entrepreneurs, e.g. Mark Zuckerberg, Bill Gates, Jack Ma. The tension between selfishness and altruism.	
<b>【Questions】</b>	
<b>【Assignments for this session (if any)】</b>	
Session 3: War (3.5 hours)	Date:7/17

<b>【Description of the Session】 (purpose, requirements, class and presentations scheduling, etc.)</b> Discussion of: How technology dominates the outcome of warfare. Drone warfare and automated weapons. Google Employees' protest of involvement the U.S. military project Project Maven. The peril of cyber warfare. The story of how the U.S. National Security Agency's hacking tools were stolen. How states use the internet for propaganda war.  The final half hour will be for three presentations by student groups on one of the topics from sessions 1, 2, or 3.	
<b>【Questions】</b>	
<b>【Readings, Websites or Video Clips】</b>	
<b>【Assignments for this session (if any)】</b>	
Session 4: Free Speech in the West (3.5 hours)	Date:7/18
<b>【Description of the Session】 (purpose, requirements, class and presentations scheduling, etc.)</b> Discussion of: The western ideal of free speech. How the western conception of free speech shapes the philosophy and policies of major U.S. technology companies like Facebook, Google, Twitter, etc. How free speech policies have become more restrictive over time at these companies. How technology companies have taken action to censor extremist speech. The Popper paradox of tolerance. How unrestricted free speech leads to abuse. The reddit.com website and various difficult decisions that it has faced over time in response to crises. This day's lectures discuss censorship unilaterally enacted by technology companies, and has nothing to do with government.  The final half hour will be for three presentations by student groups on one of the topics from sessions 1, 2, 3, or 4.	
<b>【Questions】</b>	
<b>【Readings, Websites or Video Clips】</b>	
<b>【Assignments for this session (if any)】</b>	

Session 5: Western Politics and Global Media (3.5 hrs)	Date:7/19
<p><b>【Description of the Session】 (purpose, requirements, class and presentations scheduling, etc.)</b></p> <p>Discussion of: The American electoral system. How AI and social media are used to influence elections. How Donald Trump’s son-in-law Jared Kushner used advanced information technology to help win the 2016 election .The increasing cultural and political polarization of the United States. Why facts don't change our minds. The internet allows anybody to find information to back up any viewpoint they already hold. The economic incentives for fake news. Facebook’s role in mass violence in Myanmar.</p> <p>The final half hour will be for three presentations by student groups on one of the topics from sessions 1, 2, 3, 4, or 5.</p>	
<b>【Questions】</b>	
<b>【Readings, Websites or Video Clips】</b>	
<b>【Assignments for this session (if any)】</b>	
Session 6: Privacy (3 hours)	Date:7/22
<p><b>【Description of the Session】 (purpose, requirements, class and presentations scheduling, etc.)</b></p> <p>Discussion of: The philosophical value of privacy. Potential issues with companies aggressively tracking as much information as possible about you, including data breaches and identity theft. A history of several major privacy breaches. The Cambridge Analytica and Facebook scandal. Online privacy laws in the west, including Europe’s GDPR and the California Consumer Privacy Act. Vigilante justice online in the west, where people with unpopular viewpoints are harassed by online mobs.</p>	
<b>【Questions】</b>	
<b>【Readings, Websites or Video Clips】</b>	
<b>【Assignments for this session (if any)】</b>	
Session 7: Government Censorship and Surveillance (3 hours)	Date:7/23

**【Description of the Session】 (purpose, requirements, class and presentations scheduling, etc.)**

The war on terrorism in the United States. The Apple vs. FBI case, where the FBI wanted Apple to unlock a phone but Apple refused. The increase of online censorship around the world. The Edward Snowden leaks and what we learned about the U.S. National Security Agency's spying capabilities. Google employees' protest of involvement in the creation of a censored Chinese search engine. A case study in the history of internet censorship in Turkey, and how previously banned social media outlets helped keep the Turkish government in control after an attempted coup. How attitudes about censorship vary around the world.

**【Questions】**

**【Readings, Websites or Video Clips】**

**【Assignments for this session (if any)】**

Session 8: Free Time and Attention (3.5 hours)

Date:7/24

**【Description of the Session】 (purpose, requirements, class and presentations scheduling, etc.)**

How humans find meaning through social interaction. The alarming negative associations between happiness and screen time in the social science literature. How technology and companies compete for our attention and make our lives worse in the process. How social media and other technology giants could build a better world by shifting their optimization goals from profits to human life experience.

The final half hour will be for three presentations by student groups on one of the topics from sessions 6, 7, or 8.

**【Questions】**

**【Readings, Websites or Video Clips】**

**【Assignments for this session (if any)】**

Session 9: Software Risks and Algorithmic Bias (3.5 hours)

Date:7/25

**【Description of the Session】 (purpose, requirements, class and presentations scheduling, etc.)**

Discussion of: The Therac 25 and how things can go terribly wrong with real systems even if everybody acts in good faith. How relying on market incentives can lead to disaster (e.g. the Ford Pinto). The enormous future impact of self-driving cars on reducing human misery and death. Tesla and Uber self-driving car fatalities. How people expect objectivity from algorithms, but algorithms trained on human data reflect human biases. Examples of algorithms in the world: credit scores in the west, the social credit score in China, mortgage allocation, criminal sentencing in the U.S. A case study about the COMPAS algorithm, used in the U.S. to help determine criminal sentences, and how it is mathematically and philosophically difficult to determine whether such algorithms carry harmful biases.

The final half hour will be for three presentations by student groups on one of the topics from sessions 6, 7, 8, or 9.

**【Questions】**

**【Readings, Websites or Video Clips】**

**【Assignments for this session (if any)】**

Session 10 : The Distant Future: Climate Change, AI, and Philosophy of Mind (3.5 hours)

Date: 7/26

**【Description of the Session】 (purpose, requirements, class and presentations scheduling, etc.)**

The dire predictions of computational climate models. The possibilities for reducing climate change including geoengineering. Computational models of geoengineering. A very brief history of AI. The evolution of life and intelligence on earth. The possibility of artificial general intelligence (a.k.a. human equivalent intelligence). The dramatic impacts of artificial general intelligence. The Turing Test. Searle's Chinese room. The hard problem of consciousness.

The final half hour will be for three presentations by student groups on one of the topics from sessions 6, 7, 8, 9, or 10.

**【Questions】**

**【Readings, Websites or Video Clips】**

**【Assignments for this session (if any)】**