

HUMA 2595

Dr. Jenny Leigh Smith

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Teaching Assistant: Dennis Prooi (dprooi@connect.ust.hk)

Office: Academic Building: 2378 Office Hours: Mondays 11-1 and by appt.

Meeting Times: Mondays 1:30-2:50, Fridays 9:00-10:20 in Room 2302

This course provides historical context to ethical dilemmas that have occurred in the history of 20th century science & engineering, including the decision to drop the atomic bomb, the rise and regulation of the pharmaceuticals industry, the high-profile failures of space exploration vehicles produced by the United States and the Soviet Union, and regulating the environment. Students are expected to read approximately **60-70 pages** per week.

Grading:

- Attendance & Participation: 30%
- Reading Quizzes (4): 20%
- Group Project 15%
- Group Discussion (3) 15%
- Final: 20%

Ground Rules:

- Students who sleep/ browse their phones in class will be counted as absent.
- Attendance is a part of your grade, but I maintain a “human oriented” attendance and absence policy. Do not come to class if you are sick. Do not worry about documenting your illness while you are sick. Your health comes first. We will sort it out.
- Note-taking on computers or phones is strongly discouraged. If you have physical limitations (terrible handwriting, dysgraphia, etc..) we will sort it out.
- Cheating and plagiarism are serious offenses and will not be tolerated in this class. They violate institute regulations. Learn more about HKUST’s policies on academic integrity: <http://tl.ust.hk/integrity/student-1.html>

- While your texts are largely available for free online through canvas, occasionally students will need to access a film that is behind a paywall. This paywall may require an online payment. These are required assignments and you are expected to pay for them, just as you would a textbook or other course materials.

Learning Outcomes: In this course students will...

- Gain an understanding of topics in the history of science, technology & engineering
- Improve knowledge about current issues and debates in the history of science & technology
- Understand, synthesize, and analyze major themes and debates in the topic
- Work individually and as a team to produce well-researched and in-depth final projects

How to succeed in this class: (and maybe even learn something) in four easy steps

1. plan to attend (nearly) every class. 90% is a good target. If you can't attend class, contact me **before** class and contact the professor or the TA **after** class to follow up.
2. In class, pay attention and stay awake. Use paper and a pen to jot down a few notes. **Don't take too many notes.** One page is good.
3. Do the reading. You will have 2-3 weeks to do all the readings for each module. Read at the pace that works best for you. However, you will probably not do well at the quizzes if you do not do the readings, or if you skim the readings the night before. The readings compliment the lectures, but they contain more information and different information, and I expect you to learn from both sources.
4. Invest a little! You can learn quite a lot about the topic of this class on your own-- no need to pay money, get up for class or study for quizzes. Online MOOCs mean you can earn credit for an online history class you watch on a screen. The value added of being in a classroom is found in the people around you. And **you** are their value added. So, be valuable! Speak in class, share your mints with your neighbor, complain about the

readings with your classmates before I arrive, share online resources in your native language with others who will appreciate them, email me if you read a news article related to something we are studying, stop by my office (I often have snacks...). The possibilities for investment in this class are almost endless, and the dividends are as well.

Books: (selections from these books are provided on the Canvas website)

Charles Perrow, *Normal Accidents* (selections from)

Edward Tenner, *Why Things Bite Back* (selections from)

Candis Callison *How Climate Change Comes to Matter* (selections from)

Naomi Oreskes *Merchants of Doubt* (selections from)

Geoffrey Bowker and Susan Leigh Star, *Sorting Things Out* (selections from)

Martha Lampland *Standards and their Stories* (selections from)

Eugenia Tognotti, *Lessons from the History of Quarantine* (article)

Films:

Errol Morris, *Leaving the Earth* (2000)

Dylan Mohan Gray, *Fire in the Blood* (2013)

Peter Vlemmic , *Panopticon* (2012)

Module I: science, technology & ethics (Feb 1, 8, 11,15 & 18)

Feb.1: course intro, technology, modern warfare and ethics (readings online)

Feb 4: No Class. Watch "Fire in the Blood" on your own

Feb 8: Ethics in wartime: Guernica, Unit 731, Nuremburg (readings online)

Feb 11: Ethics in Medicine: Tuskegee

Feb 15: Ethics in an emerging discipline: Stanley Milgram, Stanford Prison Experiment, Ron Jones

******Discussion questions are due by the end of the day******

Feb. 18: Quiz/ Class Discussion of Module I

Module II: Normal Accidents(Feb 22,25,Mar 1, 4 & 8)

Feb 22: Three Mile Island and Chernobyl (read Perrow p. 3-61)
Feb 25 Mar 1: Risk societies, the Challenger & Airline accidents
(read Perrow, ch. 5, 8 & 9)

Mar 1: Unintended Consequences (Reading: 2 case studies
and Edward Tenner Chapter 4 of *Why Things Bite Back*)

Mar. 4 No class: watch Leaving the Earth on your own.

******Discussion questions are due by the end of the day******

Mar 8: Quiz & Class Discussion

Module III: Climate Change and Scientific Facts (Mar 13, 15,
20, 22)

Mar 13 Case study of Ozone and Acid rain

Mar 15: D.D.T., endocrine disruptors, environmental laws and
their limits

Mar 20: Read Intro to *Silent Spring* in class, Lecture on arctic
experience of global climate change

Mar 22: Lecture:

Mar. 25: Lecture:

Student Research Projects Day: choose one of five topics
(or form a group with your own, instructor approved topic)

- Normal Accidents in recent airplane crashes
- Technology bites back: screens
- Technology bites back: popular cell phone apps
- Hong Kong Water Supply
- Hong Kong Flu Epidemics
- SARS in Asia
- Emerging high-risk technologies
- Food safety and consumer confidence
- Disputed scientific facts in air pollution
- Disputed scientific facts in water pollution
- "netizens" in China and in other countries
- Others by student choice...

April 1: Quiz/ Group Project focus session

April 5: No class, do outside research on group topics: submit
research questions, hypothesis and work plan online

Module IV: Standards & Surveillance April 8, 12, 15, 26, 29,

3, 6

Readings: Tognotti, "Lessons from the History of Quarantine" Leigh Star, Sorting things out Star & Lampland "Standards and their Stories"

April 8: Lecture: History of quarantine and the panopticon

April 12: Lecture: life insurance tables, last names & marketing research

April 15: Lecture: Surveillance, safety, privacy

April 26 & 29 (week of): No Class, Group Presentations this week. Watch "Panopticon" on your own

******Discussion questions are due by the end of the day******

May 3: Quiz #3 & Class Discussion

May 6: Last Class, Final Review