

Stevens Institute of Technology
 College of Arts & Letters
 Program in Science & Technology Studies

HST 380: Standardization and Society

Fall 2014

Mondays, 10 am – 12:30 pm

Classroom: Morton 324/325

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HST 380 provides an interdisciplinary overview of the place of standardization in modern societies. Students will explore how standards play important roles in shaping our lives as consumers and citizens, as well as how they might participate in the development and use of standards in technical and social fields. Readings, lectures, and class discussions will consider the past, present, and future of standards-setting regimes in industrial, governmental, and international arenas through examples such as standards for computing, automobiles, food, medicine, and education.

Course Objectives and Outcomes

College of Arts & Letters Objectives:

- *1. Students will demonstrate an awareness of ethical responsibility and the societal impact of their future profession.
- *2. Students will demonstrate a fuller understanding of the traditional humanities and social sciences through an understanding of their relation to the study of sciences and technology.
3. Students will demonstrate an awareness of cultures and societies other than their own.
- *4. Students will demonstrate writing and public speaking skills.
5. Students will demonstrate a love of learning in the liberal arts for its own sake.
- *6. Students will demonstrate leadership and team skills.

STS Program Outcomes:

1. *Philosophical foundation.* The student will understand the underlying theories and methods used in Science and Technology Studies and be able to apply them in individual and team research.
2. *Historical foundation.* The student will understand the evolution of the Science and Technology Studies as an academic field, and be able to discern different schools of interpretation within STS.
- *3. *Research.* The student will be able to design and conduct research and to ask and answer appropriate and original research questions.
4. *Tools.* The student will be proficient in the application of STS tools, methods, and concepts toward the resolution of practical problems.
- *5. *Professionalism.* The student will achieve a high degree of knowledge, accountability, and ability to transfer classroom experiences to professional practice.
- *6. *Leadership.* The student will be able to develop plans for research projects and policy actions on a professional level.
7. *Teamwork.* The student will be able to contribute to research activity as part of working team member, and facilitate cooperation among the members of the team resulting in a successful project.
8. *Communication.* The student will enhance written and oral presentation skills using a variety of mean to convey significant ideas and proposals.
9. *Ethics.* The student will understand and abide by professional standards of ethics appropriate for STS research.
- *10. *Social Issues.* The student will place into modern social context information derived from research such that the relationship between theory and practice are manifest.
11. *Lifetime learning.* The student will be treated as a professional with a lifelong investment in one's field of study, and a professional goal of continuing self-assessment and self-improvement.

HST 380 Course Outcomes:

1. Students will learn how standards are created, negotiated, and implemented.
2. Students will become conversant with the strategic and professional aspects of standardization.
3. Students will initiate research projects and make proposals about future standards.
4. Students will be able to identify the great variety of roles that standards play in cultural, political, and economic aspects of daily life.

Textbook to purchase (available in the campus store):

Andrew L. Russell, *Open Standards and the Digital Age: History, Ideology, and Networks* (Cambridge University Press, 2014), ISBN: 978-1107039193

Optional textbook to purchase:

Martha Lampland and Susan Leigh Star, eds., *Standards and Their Stories: How Quantifying, Classifying, and Formalizing Practices Shape Everyday Life* (Cornell University Press, 2005), ISBN: 978-0801474613.

The remainder of the course readings will be available from the course Moodle site.

Writing & Communications Center:

The College of Arts & Letters maintains the [Writing & Communications Center at Stevens](#) in Morton 210. Their office hours are Monday-Friday, 9 am - 5 pm. You can stop in or make an appointment to get help with your papers, presentations, and all other work you do at Stevens. Neither of us can recall a student who worked with the WCC and ended up with a lower grade on their assignment.

Honor Board Policies:

You should by now be familiar with [The Honor System at the Stevens Institute of Technology](#). It is your responsibility to uphold the ideals set forth in the Honor System Constitution. Specific student responsibilities include:

- Maintaining honesty and fair play in all aspects of academic life at Stevens;
- Writing and signing the pledge, in full, on all submitted academic work;
- Reporting any suspected violations to an Honor Board member or to the Dean of Student Development;
- Cooperating with the Honor Board during investigations and hearings.

If you ever have questions about how to interpret the Honor System in relation to your work in this class, please get in touch with us.

Students with disabilities:

If you require special accommodations due to a disability, or if you need individual arrangements should the building be evacuated, you must inform the office of [Student Counseling and Psychological Services](#), Dr. Jodi Streich, Director, in the Howe Center, 7th floor (x5177), and complete the Faculty Contact Form. Once you have done so, you should ask to meet with us so that we can work out necessary arrangements.

Grades and Course Policies:

Grades will be based on the following criteria:

Reading Quizzes: 20%

Participation in Class Activities: 20%

Blog: 20%

Final Paper: 20%

Take Home Final Exam: 20%

Some notes on attendance and participation

- Attendance is mandatory. Notify Profs. Vinsel and Russell *before the beginning of class* if you will be absent; otherwise we require a written explanation from an outside authority (i.e., doctor, coach, or another professor) explaining why it was necessary for you to miss class.
- Mobile phones should either be turned off or silenced and put away.
- Students may not use laptops or other computers (tablets, etc.) in class without prior permission.
- You should stay awake at all times during class.

Any students in violation of these simple rules will be marked as absent for that particular class.

Your participation will be graded according to the Zombie Scale:

4 points = Congratulations! You are a healthy adult human being! And as a responsible adult, you have prepared and are now making quality in-class contributions.

3 points = Hmm. You may have prepared, but your contributions are just OK and don't demonstrate any deep understanding of the material. Perhaps you are just having an off day, OR (!) perhaps you have been bitten and now have the zombie plague! It's hard to say . . .

2 points = It's fairly clear you've been bitten now. You have the creeping zombie crud. Most times, you sit silently, becoming gray and developing the zombie shake. Sometimes you may talk in class, but what you say is off topic, displays no sense that you read the material, or is pure nonsense. Every now and then you emit strange, small sounds, somewhere between a wheeze and a snore.

1 points = No signs of human life remain. Your body may be here, but your mind isn't. If any thought is present, it is for checking your cell phone.

0 points = Unexcused Absence. You have become so zombified you are not even here. In all likelihood, you are feasting on someone's liver in Pierce Dining Hall.

Final Paper

Students will be required to develop a 2000 word final research paper that addresses a broad theme that will be announced in class. Students can use whatever case, industry, or technological study they would like to address the given theme, but they must get their topic approved by Profs. Vinsel and Russell first. Students—especially those with strong papers—will be encouraged to submit their work to the American National Standard Institute's Student Paper Competition.

Take Home Final

On Saturday, November 22, we will hold the final simulation game, which somewhere between 6 and 8 hours. Don't worry, we'll provide lunch and snacks. This simulation is **ABSOLUTELY REQUIRED**, so students should clear their schedules now to ensure their attendance. The take home final exam will require students to submit a written analysis of the outcomes and events in the simulation, drawing on all of the insights that we have learned throughout the semester.

Blog

Students will be formed into two groups, and each member of each group will be responsible for writing an individual post for the blog every other week. Blog posts should be at least 500 words long. Ideally, students will find something standards-related to write about in the news or via the Internet and analyze that in their post. If a student is having trouble finding something in this way, he or she can always write about the required readings. Perhaps the best option are posts that bring together the required readings with something new in a creative and insightful way.

Schedule for Fall 2014

Week 1, August 25

What are Standards?

Activities: Standards Simulation Game I; Identify standards around campus; Explore existing resources for education about standardization

Week 2, September 8**Analytical Tools I****Readings:**

- Russell, *Open Standards and the Digital Age*, Chapter 1
- Susan Leigh Star and Martha Lampland, "Reckoning with Standards," in Lampland and Star, eds., *Standards and Their Stories*

Week 3, September 15**Analytical Tools II****Readings:**

- Lee Vinsel, "Engineering to the Test"
- Neil Fligstein and Doug McAdam, "Toward a General Theory of Strategic Action Fields," *Sociological Theory* 29 (2011): 1-26.

Week 4, September 22**Engineering and the Second Industrial Revolution****Readings:**

- Russell, *Open Standards and the Digital Age*, Chapters 2-3
- Charles B. Dudley, "The Testing Engineer," *Proceedings of the Annual Meeting – American Society for Testing Materials* 5 (1905), 17-29.
- P. G. Agnew, "A Step Toward Industrial Self-Government," *The New Republic* (March 17, 1926), 92-95.

Week 5, September 29**Telecommunication and Computer Networks****Readings:**

- Russell, *Open Standards and the Digital Age*, Chapters 4-6
- H.S. Osborne, "The Fundamental Role of Standardization in the Bell System," *American Standards Association Bulletin* (September 1931), 3-16.
- Bernard Strassburg, "The Marriage of Computers and Communications – Some Regulatory Implications," *9 Jurimetrics Journal* (September 1968), 12-18.

Week 6, October 6**Activity: Standards Simulation Game II**

**Week 7, October 14 [NB: Tuesday Oct 14 has a Monday schedule]
The Internet and the "Open Standards" Regime**

Readings:

- Russell, *Open Standards and the Digital Age*, Chapters 7-9
- Charles W. Bachman, "Domestic and International Standards Activities for Distributed Systems," *IEEE Compcon* (Fall 1978), 140-143.
- Stephen Oksala, "The Changing Standards World: Government Did It, Even Though They Didn't Mean To," *Standards Engineering: The Journal of the Standards Engineering Society* 52 (2000).
- OpenStand, "Principles of the Modern Paradigm of Standards," <http://open-stand.org/about-us/principles/> (2013).

**Week 8, October 20
Biology and Medicine**

Readings:

- Steven Epstein, "Beyond the Standard Human?" in Lampland and Star, eds., *Standards and Their Stories*
- Judith Treas, "Age in Standards and Standards for Age: Institutionalizing Chronological Age as Biographical Necessity," in Lampland and Star, eds., *Standards and Their Stories*

Week 9, October 27

Automobiles

Readings:

- Selections from Lee Vinsel, *Taming the American Idol*
- Albert W. Whitney, *The Place of Standardization in Modern Life* (Washington, DC: Government Printing Office, 1924).

Week 10, November 3

Activity: Standards Simulation Game III

Week 11, November 10

Food

Readings:

- Timothy Lytton, "Kosher Certification as a Model of Private Regulation," *Regulation* 36 (September 2013) 24.
- *Additional readings TBA*

Week 12, November 17**Life and Labor****Readings:**

- Martin Lengwiler, "Double Standards: The History of Standardizing Humans in Modern Life Insurance," in Lampland and Star, eds., *Standards and Their Stories*
- Martha Lampland, "Classifying Laborers: Instinct, Property, and the Psychology of Productivity in Hungary (1920-1956)," in Lampland and Star, eds., *Standards and Their Stories*
- Florence Millerand and Geoffrey C. Bowker, "Metadata Standards: Trajectories and Enactment in the Life of an Ontology," in Lampland and Star, eds., *Standards and Their Stories*

Saturday, November 22 – Time and Place TBA**Activity: Standards Simulation Game IV****Week 13, November 24****Environmental and Chemical Standards****Readings:**

- Lee Vinsel, "From R&D to Technology Assessment"
- Evan Osnos, "Chemical Valley," *The New Yorker*, April 7, 2014 (<http://www.newyorker.com/magazine/2014/04/07/chemical-valley>).
- *Additional readings TBA*

Discussion: Student Research Papers

Week 14, December 1**Conclusions, Assessments, and Conformity**