



**E&S 4500: Technology and Human Rights**  
**Fall 2012**  
**Tuesdays and Thursdays, 15:30 - 16:45**  
**Monroe Hall 134**

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**Instructor:**

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**Office Hours:** Tuesdays and Thursdays, 12:30 - 13:30 and 15:30 - 16:30

**Textbooks:**

The undergraduate thesis manual is required reading for STS 4500, even if UTM readings are not expressly listed on your instructors section syllabus.

All readings on human rights will be posted to Collab.

**Course Description and Objectives:**

STS 4500: Technology and Human Rights is an experimental course in the Department of Engineering and Society in the School of Engineering and Applied Science. The course has two primary purposes. The first is to work as a vehicle for 4th year engineering students to write a thesis prospectus for their 4th year thesis. The second purpose is to introduce engineering students to how technology and human rights interact and shape each other. The course will introduce students to basic theories of STS, fundamentals of human rights and practical applications involving technology, engineering, and human rights. Classes will focus on modern uses of technology, such as the use of social media in revolutions, or GIS in mapping human rights abuses. By the end of the course, students should have a broad understanding of many global human rights issues and different technological approaches to combating violations.

*Please do not read far in advance, the readings are subject to change. However, the course requirements are not subject to change.*

For more detailed information on the relevance of STS 4500 to SEAS and your graduation requirements, please see the 2012 STS 4500 General Syllabus.

### **Prerequisites**

There are no prerequisites. Although an interest in international relations and human rights will be helpful. In order to best prepare for this course (and life), students should read international newspapers daily along with reading required class materials.

### **Graphic Nature of the Material**

This course covers material of a very graphic nature. Discussions and audio / video presentations may contain graphic nature. Students who feel uncomfortable with this material may be excused during the duration of the presentation of such material. Yet, I do suggest students pay attention to such material. It is disturbing. However, the issues that lead up to any type of intervention are by their very nature graphic. The material is not used to shock students but is intended to educate.

### **Grading:**

This is a seminar course. Therefore, class participation is very important. Please come to class prepared to critically address the materials assigned. If you do not come prepared, it will be obvious to both the professor and your peers and you will fail to make the most of this opportunity. Since this is a summer course, the readings have been reduced. You will be assigned roughly 60 pages per night, sometimes more, sometimes less. You do not have to read every page, the point is get the general ideas.

Your grade will be based on the following:

|  |     |
|--|-----|
| Topic Statement for Technical Report (see general syllabus for more info) .....  | 5%  |
| Annotated Bibliography (see general syllabus) .....  | 15% |
| Prospectus (see general syllabus) .....  | 40% |
| Final Paper (2500 words on any topic in the syllabus) .....  | 15% |
| Participation .....  | 25% |
| — a. Attendance is required (10%). Each student is given one free absence. Any absences after two will result in a harsh penalty to your participation grade (half a letter grade on participation per absence). |     |
| — b. In order to receive a good grade on participation (15%), students are expected to participate in each discussion.   |     |

### **Academic Honesty:**

Students must sign the Honor Pledge on each assignment. Cheating of any kind will be punished according to the dictates of the Honor Code of the University of Virginia.

### **Course Outline:**

Week 1: Introductions

28 August: - Introduction to STS 4500

— The purpose of the first class is to introduce students to STS 4500, the course syllabus and the

class syllabus and all requirements.

— Introduction to syllabus and general expectations.

30 August Discuss the implications of *The Offspring* for STS 4500

This class serves as a non-traditional opening to discussing the idea of technology, engineering, and human rights through a classic episode of *Star Trek: TNG*.

— Finish *Star Trek: The Next Generation The Offspring* Season 3, Episode 16, 1990.

— Hoole, S.R., *Viewpoint: Human Rights in the Engineering Curriculum*, *Int. J. Engng Ed.*, Vol. 18, No. 6, pp. 618–626, 2002.

## Week 2: Understanding Technology and Progress

4 September: Does Technology mean progress?

By the end of class, students should have different understandings of what technology is, how technology evolves, and how technology affects our lives. This seems like a simple task but it is important to clearly define ones terms before moving forward.

— Marx, L., *Does Improved Technology Mean Progress?* *Technology Review*, January 1987, pp. 33-41.

— Nair, C., *The Myth of Technological Progress*, *South Asia Journal* Vol. 4, April 2012.

— CERN: 50 Years of Science Video

6 September: The right to technological progress

The purpose of this class is to foreshadow many of the issues we shall discuss over the course of the semester. We shall also discuss the idea that we have a right to technological progress or not.

— Chapman, A., "Towards an Understanding of the Right to Enjoy?the Benefits of Scientific Progress and Its Applications," *Journal of?Human Rights*, 2009, Vol. 8 No. 1, (2009), pp. 1-36.

## Week 3: What are Human Rights: The Old and New

11 September: Foundations of human rights

The purpose of this class is to introduce students to the foundations of human rights and briefly describe where human rights originated in order to be able to discuss 'human rights.'

— Cmiel, K., *The Recent History of Human Rights*, *The American Historical Review*, Vol. 109, No. 1 (February 2004), pp. 117-135

— *The Universal Declaration of Human Rights*

— *The International Covenant on Civil and Political Rights*

— *The International Covenant on Economic, Social, and Cultural Rights*

13 September: New human rights

Recent standard-setting in human rights has proliferated. The purpose of this class is to assess new standards and attempt to understand if they are in fact, human rights and then to understand how human rights affects specific issues cited below and vice versa.

— United Nations Special Procedures website. Skim

— On having a democratic and equitable international order.

— On international solidarity.

— On foreign debt and human rights.

## Week 4: The Custodians of Human Rights

This week will give students the chance to understand the UN (generally) and the conflict in Syria. The second class will have students undertake a class exercise, in order to see how they work in practice.

18 September: Understanding the United Nations via Syria

- The UN Website FYI
- The Charter of the UN - Read carefully the Security Council part.
- READING on history of UN
- Syria Timeline
- Additional Background reading on Syria TBD because the conflict is ongoing.
- Mediation Class Exercise Part 1

20 September: Mediation and the social aspect of rights protection.

- Mediation Class Exercise Part 2
- No readings

## Week 5: What is STS / Theories of STS

25 September: Theories of STS I

Theories of STS I introduces students to technological determinism and the STS, two approaches that are very common in STS. The use of these approaches, along with STS theories II, should help students frame their thesis projects.

- Ceruzzi, P., Moores Law and Technological Determinism: Reflections on the History of Technology, *Technology and Culture*, Vol. 46, No. 3 (Jul., 2005), pp. 584-593. SKIM
- Williams R.; Edge D., The social shaping of technology, *Research Policy*, Vol. 25, No. 6, September 1996, pp. 865-899.

27 September: Theories of STS II

Theories of STS II continues the discussion from Tuesdays class in order to introduce students to The Social Construction of Technology, an important STS theory. — Topic statements due

- Bijker W., How is Technology made? That is the Question!, *Camb. J. Econ.* (2010) 34 (1): 63-76.

## Week 6: Technology and The Market

This week examines the role that technology, globalization, business, and the market play in protecting and promoting human rights. In addition, we look at how the idea of human rights shapes business practices.

2 October: Technology and globalization

- Mbogo, Steve. "Africa Needs to Invest More in 'Life Sciences' to Benefit from Technology." *The East African*, August 18, 2012.
- Aerni, P., Stakeholder Attitudes Towards the Risks and Benefits of Agricultural Biotechnology in Developing Countries: A Comparison between Mexico and the Philippines, *Society for Risk Analysis*, 2002.

4 October: Technology and the market

— On transnational businesses and corporations.

— Readings TBD in OHCHR, *Embedding Human Rights in Business Practice II*, United Nations Global Compact and the OHCHR, 2008.

Week 7: Technology and Development

9 October: No Class (reading day)

11 October: Technology, development, and sustainability

This class examines the role that technology and engineers have to play concerning sustainability and development. These are two key areas that are in need of engineers.

— Kemp, R., *Technology and the Transition to Environmental Sustainability: The Problem of Technological Regime Shifts*, *Futures*, 1994.

— Miller, C., et al., *Science, Technology, and Sustainability: Building a Research Agenda*, NSF Supported Workshop, September 2008, pp. 1-20, skim.

Week 8: Technology and Privacy + Freedom of Expression

16 October: Technology, privacy, and freedom of expression

The key issues of privacy, the Internet, and freedom of expression are three important topics being discussed by governments around the world as well as intergovernmental bodies, and NGOs. This week takes a look at some of the key ways technology affects each.

— van den Hoven, J., and Vermaas, P., *Nano-Technology and Privacy: On Continuous Surveillance Outside the Panopticon*, *J Med Philos* (2007) 32 (3): 283-297.

— Rosen, J., *The Deciders: Facebook, Google, and the Future of Privacy and Free Speech*, *The Future of the Constitution Series*, Brookings, May 2, 2011.

— Balkin, J., *Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society*, 79 *N.Y.U. L. Rev.* 1 (2004) SKIM

18 October: Film (I will be absent for a conference; attendance is expected and will be collected).

— *The Greatest Silence: Rape in the Congo or Burma VJ*

— NB! This film contains graphic material that some people may find disturbing. If you do not believe you are able to watch this film, please let me know beforehand and we will work out a suitable replacement assignment

Week 9: Technology and Equal Rights

23 October: Technology and womens rights.

— Annotated bibliographies are due

— Lemons, M., and Parzinger, M., *Gender Schemas: A Cognitive Explanation of Discrimination of Women in Technology*, *Journal of Business and Psychology*, Vol. 22, No. 1 (September 2007), pp. 91-98.

— Campbell, N., *Suspect Technologies: Scrutinizing the Intersection of Science, Technology, and Policy*, *Science, Technology, and Human Values*, Vol. 30, No. 3, (Summer, 2005), pp. 374-402.

25 October: Technology and Voting

— Brgers, T., Is Internet Voting a Good Thing? *Journal of Institutional and Theoretical Economics* (JITE), Vol. 156, No.4, (December 2000), pp. 531-547.

— Schuler, I. SMS as a Tool for Election Monitoring. *Innovations*, Vol 3; Issue 2. MIT Press. (Spring 2008)

Week 10: Technology and Health

By the end of week 10, students should have a better understanding of how technology and biomedicine interact with the concept of human rights and how this interaction may shape the future. The second part of the week looks at the future of healthcare and technology.

30 October: Technology and Biomedicine

— Barilan, Y.M., and Brusa, M., Human Rights and Bioethics, *Journal of Medical Ethics*, Vol. 34, No. 5, (May 2008), pp. 379-383.

— Beyleveld, D., and Brownsword, R., Human Dignity, Human Rights, and Human Genetics, *The Modern Law Review*, Vol. 61, No. 5, September 1998.

1 November: Technology, Healthcare, and Future Debates

— Malby, S., Human Dignity and Human Reproductive Cloning, *Health and Human Rights*, Vol. 6, No. 1, (2002), pp. 102-135.

— Ebomoyi, W., and Ebomoyi, J., International Health and Emerging Infectious Diseases, *Journal of Health and Human Services Administration*, Vol. 23, No. 1, (Summer, 2000), pp. 83-99.

Week 11: Technology and Documenting Violations of Human Rights

There are no readings this week. Instead, you will take your ideas and present them in small groups to better develop your papers before they are due. As a reward for writing your papers and turning them in on Thursday, we shall watch an important film on document abuses in Sudan.

6 November: — No Readings

— Writing Workshop day

— Students shall bring what they have to class and we will blind proofread papers w/ comments.

8 November: — Prospectuses are due

— Film: *The Devil Came on Horseback*

— NB! This film contains graphic material that some people may find disturbing. If you do not believe you are able to watch this film, please let me know beforehand and we will work out a suitable replacement assignment.

Week 12: Technology and Social Movements

This week focuses on social movements and social justice and how technology is shaping the way people mobilize for such movements. In addition to the readings, we will talk about this past summers events at UVa and how technology played a role in the affair.

13 November: Technology and revolutions

— Sara Reardon, Was it Really a Facebook Revolution? *The New Scientist*, Vol. 214, No. 2859, (April 2012).

— Gladwell, M., Small Change: Why the Revolution will not be Tweeted? *The New Yorker*, Octo-

ber 4, 2010.

— Ghannam, J., In the Middle East, This is not a Facebook Revolution, The Washington Post, February 20, 2011.

15 November: Technology and social Justice

— Riley, D., Engineering and Social Justice, Synthesis Lectures on Engineers, Technology and Society, Vol. 3, No. 1, 2008 Sections TBD

Week 13: Technology and Understanding Violations

Understanding violations is an important part of the work of human rights defenders. This week, we take a look at some of the emerging technologies in the field and how they are shaping the work of human rights defenders.

20 November: Technology and coding for human rights violations

— Examine Amnesty Internationals Eye on Syria website.

— Examine Amnesty Internationals Science for Human Rights website.

— Examine AAASs Program on Geospatial Technologies and Human Rights.

— Levinger, M., GIS Technologies and Genocide Prevention. USIP Press. (2008)

22 November: No Class (Thanksgiving)

Week 14: Technology and Waging War and Peace

The final full week has us examining the dichotomy that is war and peace and how each has an important role to play in protecting human rights. Well do this with special emphasis on emerging technologies.

27 November: Technology and waging war

— Farwell, J., and Rohozinski, R., Stuxnet and the Future of Cyber War, Survival: Global Politics and Strategy, Vol. 53, No. 1., 2011.

— Wall, T., and Monahan, T., Surveillance and violence from afar: The politics of drones and liminal security-scapes, Theoretical Criminology, Vol. 15, No. 3, August 2011.

29 November: Technology and waging peace

— TBD

— Kyem, P., Of Intractable Conflicts and Participatory GIS Applications: The Search for Consensus Amidst Competing Claims and Institutional Demands, Annals of the Association of American Geographers, Vol. 94, No. 1 (Mar., 2004), pp. 37-57 SKIM

— Rutherford, K., "Internet activism: NGOs and the Mine Ban Treaty", International Journal on Grey Literature, Vol. 1, No. 3 (2000), pp. 99 106.

Week 15: Wrapping up STS 4500

4 December: Technology and the future of human rights: a debate and final thoughts

6 December: No Class (Classes have ended)