Sociology of Technology

As students and researchers, we are relying more and more of the soft versions of our readings than and less on books compiled and printed at printing presses. In a single day you might talk to your parents on your cell phone, buy books on the internet with a credit card, enter your student number to register for class, or drive to the store. Technology is everywhere, and even if we take it for granted it is easy to see that it influences our lives. But how do our lifestyles, our values and social norms influence technology in the first place? Where do new technologies come from, how are they picked up and used, and why are they crafted the way they are? What is the dark side of technology: what is the nexus between technology, society and crime; and how has technology the face of war and conflict in the world. Addressing these questions with examples,

 The course identifies and describes numerous sociological theories and concepts which help us understand the dynamics of technological development and diffusion, as well as the impact of technology on social interaction, community, medicine, organization of work, food production, the natural environment, transportation, communications, and more.

Course Requirements and Grading

Reflection Papers: Students are required to write a reflection paper of no more than 500 words on each of the assigned readings. In this paper, students will critically reflect on the day's readings. Reflection papers must be **submitted during the class time**. Cumulative percentage of all reflection papers will be 20% of the final grade.

Research Paper: Students are required to write a 15-20 page research paper. Topic of the paper should fall within the framework of the concepts covered in the class. At the minimum, **paper should include at least six articles from academic journals (or two books and two academic articles).** This is a minimum requirement and by no means should be taken as a limit. Those students who wish to get a better grade would consider more in-depth study of their topics. Students may also cite materials covered in the class or sources like newspaper articles and other non-academic journals to boost their arguments in the paper. This paper will count for 15% of the student's final grade. Students are encouraged to start working on the paper at their earliest, and consult teacher of the course along the way to make sure that they are on the right track. **Research papers should be submitted three weeks before the final term exams**.

Presentation (Research Paper): Students are required to present their research papers during allotted times. Presentation time is 15 minutes, followed by a question-answer session. Students will be graded based on content, organization, and manner of presentation, as well as their participation in question-answer sessions, both as presenters and audience. This assignment will be worth 5% of the final grade.

Book Report: Students are required to write a critical book report on a classical text and discuss it in the classroom **(Books for report must be approved by the instructor).** Specific instructions for this assignment will be distributed during the fifth week of the classes. On average, length of

this report should be anywhere between 9-12 pages. Total worth of this book report is 10 %. **Book report should be submitted one week before the midterm exams**

Exams: There will be two exams in this class, a midterm and a final. These exams will be closed book and conducted in the class room. Exams will be based on assigned readings, class discussions, lectures and any other learning activities done in the class room by the exam date. Midterm exam will be worth 20% and final exam will be worth 25% of the final grade.

Attendance & Class Participation: Students are required to come to class regularly. Attendance will be taken in each class. University policy on attendance will be followed. Class participation is also a vital part of this class. Students are required to read the assigned material prior to the class meetings and come prepared to take part in the discussion and learning activities related to that material. Participation includes, but not limited, reading the assigned material for the class, asking questions about the day's readings, answering questions raised by the instructor, spontaneously responding to the on-going discussion in the class, and taking part in the in-class activities. Overall, combined grade for attendance and participation is 5%of the student's final grade.

Grade Evaluation Criteria

Following is the criteria for the distribution of marks to evaluate final grade in a semester.

Marks Evaluation	Marks in percentage
Reflection Papers	20%
Research Paper	15%
Presentation (Research Paper)	5%
Book Report	10%
Midterm Exam	20%
Final Term	25%
Attendance & Class Participation	5%
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Total	100%

COURSE POLICIES

A Note on Academic Honesty: It must be emphasized that university policies on academic dishonesty will be strictly followed. These policies prohibit acts of cheating, lying and deceit in their diverse forms. Since this class includes research component, students must also be fully aware of plagiarism. Plagiarism involves presenting someone else's ideas or written work as your own, without giving proper citation and credit to the original source. If you still have any

question or confusion about academic dishonesty, please do not hesitate to discuss with the teacher.

Make-up Exams and Late Assignments: There will be no make-up exams, unless there is a valid (documented) reason for not taking the scheduled exams, or prior arrangements have been made with the instructor. As of late assignments, ten per cent of the grade will be deducted for each day an assignment is late. Students will also lose percentage of assignment grades if incomplete assignments are turned in.

Required Reading

Volti, R. (2014). *Society and Technological Change* (7th ed.). New York, NY: Worth Publishers. ISBN-13: 9781429278973.

Course Schedule

Week 1

What is Technology?

Required reading:

Volti, ch. 1, "The Nature of Technology"

Recommended reading:

Marx, Leo. 1993. "Does Improved Technology Mean Progress?" Pp. 3-14 in *Technology in the Future*, edited by Albert H. Teich. New York: St. Martin's Press

Week 2

The Two Faces of Technology

Required reading:

Volti, ch. 2, "Winners & Losers: The Differential Effects of Technological Change"

Recommended reading:

McMahon, Robert et al. 2011. "Digital Divides and the 'First Mile': Framing First Nations Broadband Development in Canada," *The International Indigenous Policy Journal.*Vol. 2, Issue 2

Week 3

Theories of Technological Change: Part 1

Required reading:

Volti, ch. 3, "The Sources of Technological Change"

Volti, ch. 6, "Technology, Energy, and the Environment"

Recommended reading:

Mignone, Javier et al. 2008. *Information and Communication Technology in Aboriginal Communities in Canada: Increasing Aboriginal Social Capital*

Week 4

Theories of Technological Change: Part 2

Required reading:

Volti, ch. 4, "Scientific Knowledge and Technological Advance"

Recommended reading:

Ramirez, R., and Richardson, D. 2005. "Measuring the impact of tele- communication services on rural and remote communities".*Telecommunications Policy, Vol. 29*

Week 5 and Week 6

Theories of Technological Change: Part 3

Required reading:

Volti, ch. 18, "Technology and its Creators: Who's in Charge of Whom?"

Volti, ch. 8, "Genetic Technologies"

Week 7

Theories of Technological Diffusion

Required reading:

Volti, ch. 5, "The Diffusion of Technology"

Week 8

MIDTERM EXAMINATION

Week 9

Technology and Jobs: Part 1

Required reading:

Volti, ch. 10, "Technology and Jobs: More of One and Less of the Other"

Recommended reading:

Volti, ch. 9, "Work in Non-industrial Societies"

Week 10

Technology and Jobs: Part 2

Required reading:

Volti, ch. 11, "Technological Change and Life on the Job"

Recommended reading:

Ritzer, George. 2008. "Control: Human and Non-human Robots". Pp. 115-139 in *The McDonaldization of Society,* George Ritzer. Thousand Oaks, CA: Pine Forge

Week 11

Surveillance Technologies

Required reading:

Volti, ch. 13, "The Electronic Media"

Volti, ch. 14, "The Internet Age"

Recommended reading:

Monahan, Torin. 2009. "Questioning Surveillance and Security". Pp. 537-557 in *Technology and Society: Building our Sociotechnical Future,* edited by Deborah G. Johnson and Jameson M. Wetmore. Cambridge, Massachusetts: MIT Press

Week 12

Technology and Organizations

Required reading:

Volti, ch. 19, "Organizations and Technological Change"

Week 13

Technology and Government

Required reading:

Volti, ch. 20, "Governing Technology"

Recommended reading:

Diane Vaughan, "Conformity and Tragedy," Ch. 9 in The Challenger Launch Decision: Risky Technology, Culture and Deviance at NASA (University of Chicago Press, 1996), p.334-386.

Sonja Schmid, "Transformation Discourse: Nuclear Risk as a Strategic Tool in Late Soviet Politics of Expertise," Science, Technology and Human Values 29 (2004): 353- 376.

British Petroleum Incident Investigation Team, "Overview of Deepwater Horizon Accident Analysis," Section 4 in Deepwater Horizon Accident Analysis Report (September 8, 2010), p.31-48. Access online via Blackboard.

Week 14: Technology and social order: Perspectives of technology and gender

Ellen van Oost "Materialized Gender: How Shavers Configure the Users' Femininity and Masculinity," in: Pinch and Oudshoorn, Eds., How Users Matter (MIT Press, 2003): 193-208.

Nelly Oudshoorn, "How Man Came to be Included in the Contraceptive Research Agenda," Ch. 2 in The Male Pill: A Biography of a Technology in the Making (Duke University Press, 2003), p. 19-51.

Wihua Wu, Steve Fore, Xiying Wang and Petula Sik Ying Ho, "Beyond Virtual Carnival and Masquerade: In-Game Marriage on the Chinese Internet," Games and Culture 2 (2007): 59-89.

Week 15

FINAL EXAMINATION