**IST 530: Foundations of Social Informatics**

**Instructor: Andrea Tapia, Ph.D.**

**Office Address: E380 Westgate Building**

**Office Hours: Wednesdays 1:00-3:00pm**

**email: axh50@psu.edu**

**Venue: 9:05am - 12:05, Room E208 Westgate**

**Course Description**

This course is concerned with the human context within which information and information technology (IT) exists. It examines the interaction between the human (or groups of humans) and IT, and research issues that arise from this interaction. The course introduces students to relevant theories and theoretical frameworks that are used to enable better understanding of this interaction between humans and IT. Our focus is on the critical analysis of social, cultural, philosophical, ethical, legal, public policy and economic issues relating to information technologies, and how these interactions shape technology design, uptake and use. Topics include technological innovation, computerization, and digital information are associated with dilemmas, value conflicts, and choices surrounding the scholarly, personal, and professional use of information.

**Course Objectives**

Students who take this course will leave having mastered the basics of approximately 10 essential social theories concerning the intersection of humans and technology. The first half of class focuses on technology and its role in society (what technology does), while the second half focuses on the construction of technology (how technology is made). Some of the theories students learn are Social Informatics, Structuration Theory, Actor Network Theory, Social Shaping of Technology, and Theory of Communicative Action. Students who finish the course will have also contributed to the creation of an online portfolio of social theories of technology that can be referenced as you proceed through your own research.

At the end of this course, students will be able to:

* Analyze social aspects of information technology including benefits and drawbacks of technology implementation;
* Identify approaches to resolving social dilemmas surrounding information technology development, decision-making, and use;
* Demonstrate new information technologies in such a way as to convey both the social assumptions built into the system and potential impacts of the system on social relations, work-life, and productivity;
* Describe the basic tenets of popular social theories of technologies, and employ one or more of those theories in your own work;
* Describe the value of social informatics in professional and intellectual disciplines;
* Apply skills of persuasion, argument and effective written communication in relation to social issues.

This course is conducted in seminar fashion and is highly participatory. It intends to leverage the varied disciplinary and cultural backgrounds of the students in order to enhance our understanding of the human context on information and technology.

**Course Assignments & Evaluation**

**Binder (Individual)**

Students are expected to create an online binder in which all course materials are stored. This binder will be viewed and graded at the end of the semester.

The binder will include 1. All assigned readings. 2. Any additional readings. 3. Your reading notes. 4 your in-class notes. 5. the slides and notes from the presenting team. 6. Links.

**Exams (individual)**

There will be two in-class exams. One midterm and one final. These exams will take one hour and will be primarily essay. They will be open note/open book.

**Weekly Reading Notes (individual)**

Before class, students will read the assigned papers and write approximately 2 single-spaced pages of reading notes. This should be critical, insightful, and tied to your own interests and work. There is room for considerable formal variation here, and a set of thinking/writing prompts are provided. Some students will elect to use these to produce concise summaries of key points and arguments. Others may use these to explore thoughts, questions, and concerns raised by the assigned pieces. The main goal is to use the reading note process to engage the readings in a more sustained and incisive way, while beginning to accumulate a record of notes and responses that will hopefully be of some use beyond the immediate confines of the course itself. Reading notes should be posted to Canvas by midnight on the day before the seminar.

**Discussion Leadership (team assignment)**

During the first class session, students will be grouped into teams. Each group will be assigned to lead the discussion for one topic. Each student group will be responsible for introducing and opening discussion of the readings. Groups will have two primary responsibilities:

1. Produce a set of slides that (1) discuss the basic elements of the assigned theory of the day in general terms, and (2) pull out what you as a group find most interesting, useful, noteworthy, or provocative about the readings. There should be some organizing principle(s) or question(s) that can ground, guide, and provoke our group discussions. The slides should be posted to ANGEL no later than midnight the day before the seminar. (Nb: during the weeks you are leading seminar discussions, you are NOT required to produce individual reading notes).
2. Present your slides to introduce the readings and topics in class. Groups will be strictly limited to 30 minutes max for presenting slides. At the conclusion of the presentation (or during the presentation), the groups should offer some discussion questions The goal here is to prime the pump for discussion, not give an exhaustive blow-by-blow account of the readings we’ve all just completed (though some reference back to key themes and passages may be helpful).

**Mini Research Projects (team assignment)**

Student teams will work both in class and outside of class to develop a research approach for a study that employs theory.. The research approach must involve people and technology in a real-world setting. Teams will develop a 15 minute presentation and a short paper to share your ideas with the class.

**Grading**

Midterm Exam: 20%

Final Exam: 20%

Reading notes: 10%

Discussion leadership: 10%

Binder: 20%

Mini Research Project: 20%

**TEXTS (3. All online)**

Sismondo, Sergio, (2010) An Introduction to Science and Technology Studies. Wiley Blackwell.

Download .pdf here <https://epdf.pub/an-introduction-to-science-and-technology-studies-second-edition.html>

2. Schroeder, Ralph. 2018. Social Theory after the Internet. London, UCL Press.

Download here <http://discovery.ucl.ac.uk/10040801/1/Social-Theory-after-the-Internet.pdf>

3. Mathewmann, Steve, (2011) Technology and Social Theory Macmillan International Higher Education.

Download pdf here. <https://www.researchgate.net/publication/316314144_Theorizing_Technology>

Ebook here: https://books.google.com/books?id=AKIcBQAAQBAJ

**SCHEDULE**

**Week 1: Wednesday 8/28**

Introduction to the class. Explanation of the syllabus. (Dr. Tapia)

Student Introductions. (All students)

Form teams. Build Binders. Choose and Install Annotation software.

**Week 2: Wednesday 9/4**

TOPIC: What is Science?

Read: Sismondo, Chapter 1 The Prehistory of Science and Technology Studies, pages 1-11

Read: Sismondo, Chapter 2 The Kuhnian Revolution, pages 12-22

PRESENTERS Team 1 Matt McGee Chris Doty Taylor Blose

VIDEO: <https://www.youtube.com/watch?v=sOGZEZ96ynI> <https://www.youtube.com/watch?v=JQPsc55zsXA> <https://www.youtube.com/watch?v=euE7PP_RUfk>

Key Terms: <https://writing.colostate.edu/guides/guide.cfm?guideid=90> <https://www.tutor2u.net/psychology/reference/research-methods-key-term-glossary>

Academic Lineage.

**Week 3 Wednesday 9/11**

TOPIC: What is Theory?

READ: Matthewman text—Introduction and Chapter 1: Theorizing Technology. Pages 1-28

Sutton, Robert and Staw, Barry, (1995) “What Theory is Not.”

DiMaggio, P. J. (1995). Comments on" What Theory is Not".

Weick, Karl, (1995)“What Theory is Not, Theorizing Is” Administrative Science Quarterly, 40(3)

<https://www.jstor.org/stable/i341370>

PRESENTERS-- Team 4 : RED Lan(Emma) Zhang, Jiexiao(Sherry) He, Zhilong Wang

Ellysa Cahoy <[ellysa@psu.edu](mailto:ellysa@psu.edu)> will present annotation software from the Library.

**Week 4 Wednesday 9/18**

TOPIC: Technological Determinism and Functionalism

READ: Matthewman—Chapter 2 Marx, Modernity and the Machine. Pages 29-49

Shroeder, 1.6 Who’s afraid of Technological Determinism, pages 18-21.

Sismondo, Chapter 3 Questioning Functionalism in the Sociology of Science, pages 23-35

Sismondo, Chapter 9, Two Questions Concerning Technology, pages 93-105

Presenters-- Team 2 : YELLOW Jeongwon Jo (Sienna Cho), Rajal Nivargi, Guillermo Romer, Bayan

VIDEO: https://www.youtube.com/watch?v=Tv5gBFqzQfY

**Week 5 Wednesday 9/25**

TOPIC: Social Construction of Technology

Sismondo, Chapter 6, The Social Construction of Scientific and Technical Realities, pages 57-71

Mathewman, Chapter 5, The Social Construction of Technology, pages 92-103

Team 3 : PURPLE Dolzodmaa , Amogh , Ziheng Liu

**Week 6 Wednesday 10/2**

TOPIC: Actor Network Theory

Mathewman Chapter 6, Actor Network Theory, pages 104-125

Sismondo, Chapter 8, Actor Network Theory, pages 81-92

Team 5 : BLACK Qin Yin, Shixiong Jing, Tianxiang

**Week 7 Wednesday 10/9**

TOPIC: Do Artifacts Have Politics?

READ: (1 book chapter and 2 online/Angel articles)

Matthewman text. Chapter 4. The Politics of Artifacts. Pages 70-91

Winner, Langdon (1980) Do Artifacts have Politics. http://zaphod.mindlab.umd.edu/docSeminar/pdfs/Winner.pdf

Woolgar and Cooper, (1999) Do Artefacts have Ambivalence? Moses’ Bridges, Winner’s Bridges and Other Urban Legends in STS. http://www.jstor.org.ezaccess.libraries.psu.edu/stable/285412?seq=1

**Week 8 Wednesday 10/16**

**Mini Project Proposal Due. 2 pages.**

**Midterm Exam**

**Week 9 Wednesday 10/23**

Topic: Politics, Science and the Public

Read Sismondo, chapters 15, 16, and 17, pages 168-204

**Week 10 Wednesday 10/30**

Topic: Subjective and Objective

Read Mathewman, Chapters 7, 8, and conclusion--Left to our own devices and Objective Life, pages 126-176

**Week 11 Wednesday 11/6**

Topic: Media

Read Shroeder, Chapters 2 and 3, Media Systems and Digital Media, pages 28-81

**Week 12 Wednesday 11/13**

Topic Everyday Life

Read Shroeder, Chapters 4 and 5, The Internet in Everyday Life, pages 82-125

**Week 13 Wednesday 11/20**

Topic: Big Data

Read Shroeder, Chapter 6, Big Data, pages 126-148

**(Wednesday 11/27 no class. Thanksgiving Holiday)**

**Week 14 Wednesday 12/4**

Topic: Futures

Read Shroeder, Chapter 7, Futures, pages 149-169

**Week 15 Wednesday 12/1**1

**Binder Due**

**Team Presentations**

**Week 16 Wednesday 11/18**

**Final Exam**

Team 1 : BLUE

Matt McGee Chris Doty Taylor Blose

Team 2 : YELLOW

Jeongwon Jo (Sienna Cho), Rajal Nivargi, Guillermo Romer, Bayan

Team 3 : PURPLE

Dolzodmaa , Amogh , Ziheng Liu

Team 4 : RED

Lan(Emma) Zhang, Jiexiao(Sherry) He, Zhilong Wang

Team 5 : BLACK

Qin Yin, Shixiong Jing, Tianxiang

Team 6 : GREEN

Fredrick Ryans, Connor Heaton, Anita Chen

Academic Integrity

According to the Penn State Principles and University Code of Conduct, academic integrity is a basic guiding principle for all academic activity at Penn State University, allowing the pursuit of scholarly activity in an open, honest, and responsible manner. In accordance with the University’s Code of Conduct, you must not engage in or tolerate academic dishonesty. This includes, but is not limited to cheating, plagiarism, fabrication of information or citations, facilitating acts of academic dishonesty by others, unauthorized possession of examinations, submitting work of another person, or work previously used without informing the instructor, or tampering with the academic work of other students. Any violation of academic integrity will be investigated, and where warranted, punitive action will be taken. For every incident when a penalty of any kind is assessed, a report must be filed.

Americans with Disabilities Act

The College of Information Sciences and Technology welcomes persons with disabilities to all of its classes, programs, and events. If you need accommodations, or have questions about access to buildings where IST activities are held, please contact us in advance of your participation or visit. If you need assistance during a class, program, or event, please contact a member of our staff or faculty in charge. Access to IST courses should be arranged by contacting the Office of Human Resources, 332 IST Building: (814) 865-8949.

Students with Disabilities

It is Penn State’s policy to not discriminate against qualified students with documented disabilities in its educational programs. (You may refer to the Nondiscrimination Policy in the Student Guide to University Policies and Rules.) If you have a disability-related need for reasonable academic adjustments in this course, contact the Office for Disability Services (ODS) at 814-863-1807 (V/TTY). For further information regarding ODS, please visit the Office for Disability Services Website at http://equity.psu.edu/ods/ (Links to an external site.). In order to receive consideration for course accommodations, you must contact ODS and provide documentation (see documentation guidelines at http://equity.psu.edu/ods/guidelines/documentation-guidelines (Links to an external site.)) (Links to an external site.). If the documentation supports the need for academic adjustments, ODS will provide a letter identifying appropriate academic adjustments. Please share this letter and discuss the adjustments with your instructor as early in the course as possible. You must contact ODS and request academic adjustment letters at the beginning of each semester.

Statement on Nondiscrimination & Harassment (Policy AD42)

The Pennsylvania State University is committed to the policy that all persons shall have equal access to programs, facilities, admission and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by University policy or by state or federal authorities. It is the policy of the University to maintain an academic and work environment free of discrimination, including harassment. The Pennsylvania State University prohibits discrimination and harassment against any person because of age, ancestry, color, disability or handicap, national origin, race, religious creed, sex, sexual orientation, gender identity or veteran status. Discrimination or harassment against faculty, staff or students will not be tolerated at The Pennsylvania State University. You may direct inquiries to the Office of Affirmative Action, 328 Boucke Building, University Park, PA 16802-5901; Tel 814-865-4700/V, 814-863-1150/TTY. For reference to the full policy (Policy AD42: Statement on Nondiscrimination and Harassment), see http://guru.psu.edu/ policies/AD42.html (Links to an external site.).