



Stony Brook University

Department of Technology & Society

EST 391 Technology Assessment

Prerequisites: MAT 127 or MAT 132 or MAT 142 or MAT 171 or AMS 161; U3 or U4
M 5:30-8:20
Javits 103

Instructor: David Tonjes
Email: david.tonjes@stonybrook.edu

Office Hours: M 2-5 or by appt.
Office Location: (old) Comp Sci 1424

Course Description: This class focuses on technologies and the systems in which they evolve to highlight different forms of evaluating technology. An overview of various methods, approaches, and tools for evaluation will be provided, including SWOT, STIP, forecasting, lifecycle assessments, and impact and risk assessments. The class will provide a context and framework for understanding policy applications of various technologies, as well as broader societal implications. Challenges and opportunities of technological change will be examined in the context of societal implications, including environmental change, ethics, economics, science and engineering, and infrastructure. Students evaluate real-world technologies throughout the semester.

Learning Objectives:

Successful students will understand strengths and weaknesses of various technology assessment methods, and demonstrate analytical skill in evaluating questions about technology choices.

Class Readings:

Braun, E. (1998). Technology in Context. Routledge: New York, NY. Posted on BlackBoard.
Fernandez, L., and SJ Matt. (2019). Bored, Lonely, Angry, Stupid. Harvard University Press, Cambridge, MA. Available on Amazon, etc.

Grading:

Homework:	20%
Summaries:	20%
Midterm:	20%
Final/Paper:	35%
Last week attendance:	5%
Optional presentation:	+5%

	B+: 82-84	C+: 72-74		
A: 90+	B: 78-81	C: 68-71	D: 60-64	
A-: 85-89	B-: 75-77	C-: 65-67	F: <60	

Homeworks: 5 homeworks will be assigned, due the next class; 50% penalty for late submission (after 7 days, 0 credit). Submit through BlackBoard.

Summaries: 1 page ea.: 2 key Braun chapters (Ch. 2, Ch. 5); 1st. half of “Bored, Lonely” (Intro, Ch. 1-3) and 2nd half of “Bored, Lonely” (Ch. 4-6). Submit through BlackBoard.

Midterm: in class: combination of short answers and short essays. Open book.

Last week attendance: mandatory for all

Optional presentation: students doing a paper can make a 10-min presentation on their paper for up to 5 pts extra credit (restricted to first 15 students to sign up; request submitted by email so there is a time stamp)

Final: during finals week: combination of short answers and short essays. Closed book.

Paper: substituted for Final. Due last class of the semester. Technology assessment topics: 1) the English longbow (1200s-1400s); 2) the smart phone (current); 3) nuclear power (the next 30 years). Minimum length: 10 pp. Must be researched (and properly cited).

Research means collecting information from (reliable) sources to supplement personal knowledge. **Properly cited** means identifying where the information was found in such a way that another person can find the same information (and associating the information in the paper correctly with its source so it is understood what source was used to provide what information).

Semester Schedule:

Week	Topic	Readings	Assignment (due this week)
8/26	Intro	Ch 1	
9/2	No class – Labor Day		
9/9	Technology assessment fundamentals (STIP)	Ch 2	
9/16	Cost-benefit analysis		Braun Ch. 2 summary
9/23	Risk Assessment, Part 1	Ch 3 & 4 along the way	Hmwk. 1
9/30	No Class – Instructor at Conference		
10/7	Risk Assessment Part 2		Bored, Lonely #1 summary
10/14	No Class – Fall Break		
10/21	SWOT		Hmwk #2
10/28	Midterm		
11/4	LCA	Ch 5	Hmwk. #3
11/11	EIS		Hmwk. #4
11/18	Technology and Public Policy		Hmwk. #5
11/25	Forecasting		Braun Ch. 5 summary
12/2	Implementing a TA: Immigration Controls for the US		Bored, Lonely #2 summary
12/9	Optional student presentations		Paper due Attendance is mandatory

Plagiarism

Plagiarism is passing off some else's work as your own. It consists of copying, intellectual property theft, and unauthorized collaboration. Do not copy material from the web or other sources. Do not use someone else's ideas or work without sufficient attribution (this means you need to be careful and record "who, what, and where" when researching) (find examples from professional research work for referencing and use that) (do not cite generic websites – www.wikipedia.org – as that is a meaningless reference). Do not work with someone else if the work is supposed to be your own.

There are four reasons why plagiarism should be avoided:

- 1) University Policy
- 2) Intellectual Honesty (your name is on the paper, not the source you copy from)
- 3) Learning Process (explaining things in your own words causes you to think more and more completely about these concepts and facts)
- 4) We will catch you (there are dire penalties)

Do not plagiarize.

Student Accessibility Support Center Statement

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Student Accessibility Support Center, ECC (Educational Communications Center) Building, Room 128, (631)632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Student Accessibility Support Center. For procedures and information go to the following website: <http://www.stonybrook.edu/ehs/fire/disabilities>.

Academy Integrity Statement

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at http://www.stonybrook.edu/commcms/academic_integrity/index.html

Critical Incident Management

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.