

STS 1010-8: Survey of Science and Technology in Society

Connectivity and the Cult of Innovation

Spring 2017
MW 2:30-3:45p Daniel 205

David Foltz
E-mail: davidf@clemson.edu
Office: Strode 507
Office Hours: MWF 9:00-9:40a; MW 4:15-6:15p; and by
appt.

OVERVIEW

This course is an introductory study of science and technology in social context. Topics include the fundamentals of science and technology as constructs, the interrelations between science and technology, societal impact on science and technology, and—as importantly, if not more so—the impact of science and technology on society. We will work to develop considered, evidenced perspectives on these forces within the social framework. In particular, we will examine contemporary enthusiasm—mania?—for what is called “innovation” and its promise of a better—best?—world. Progress in the course will necessarily facilitate development of critical thinking skills. These skills will be practiced, tested, and documented through application of course concepts in writing and discussion.

GENERAL EDUCATION COMPETENCY

In successfully completing this course, students will demonstrate an understanding of

- issues created by the complex interactions among science, technology, and society—the STS competency
- the arts and humanities in historical and cultural contexts—the Arts and Humanities competency.

The course’s emphasis on critical thinking in *writing assignments*, especially, provides repeated opportunity for the development of artifacts demonstrating these competencies.

REQUIRED TEXTS and MATERIALS

In addition to a laptop with Respondus LockDown Browser installed, you will need the common STS textbook available at the university bookstore. You must purchase this exact edition:

Thomas Oberdan, *Science, Technology, and the Texture of Our Lives*. Third Edition.

Other **required** readings will be posted on Canvas as web links, PDFs, or other electronic files. You must print and bring these texts to class in hard copy—no electronic versions are allowed in class. Get in the habit of checking Canvas and your e-mail regularly—e.g., several times a day—since I often post important class information and instructions between meeting times. You are responsible for any information communicated in-class or online. Failing to check Canvas or your e-mail does not excuse a lack of preparation for class or failure to follow given instructions.

CRITICAL THINKING and *CT²*

As a *Clemson Thinks²* seminar (*CT²*), this course emphasizes the inculcation, development, and application of critical thinking skills. Cultivating critical thinking as both skillset and worldview is one of the primary goals we will strive toward through analysis of STS concerns, simultaneously reflecting the goals of the STS program and *CT²*. *Critical thinking* is a matrix of behaviors, skills, and attitudes that work in conjunction to produce *better thinking*. For our purposes, *better thinking* means, for any complex question,

- Identifying key points of information, distinguishing what is necessary to consider from what is not
- Recognizing assumptions
- Differentiating opinion, fact, and justified claims
- Evaluating the applicability and quality of supposed evidence
- Discriminating between valid and invalid inferential claims (including instances of logical fallacy)
- Considering other viewpoints and related alternative responses
- Assessing the logical and practical consequences of a given response.

Of course, this list is not all-inclusive. However, in short, it sums up some critical thinking basics that we will practice as we work toward our goal of becoming better thinkers, and one hopes, better decision-makers. We will measure our progress toward that goal in relation to the following *learning outcomes*, or what students who successfully complete a class will know and be able to do.

CT² Learning Outcomes	Learning Outcomes for this Class
<p><i>These are essential critical thinking skills...</i></p> <ul style="list-style-type: none"> • Explore complex challenges • Analyze multi-dimensional problems • Extrapolate from one conceptual context to others • Synthesize alternative solutions to multi-dimensional challenges • Effectively communicate complex ideas. 	<p><i>...and this is how we “do” them in STS 1010.</i></p> <ul style="list-style-type: none"> • Define the purpose, characteristics, and historical development of science and technology; recognize intersections between scientific and technological development and social concerns. • Identify and explain historical and contemporary notions regarding the relationships between science, technology, and society, both those stated explicitly and held implicitly. • Examine the effects of historical and contemporary understandings of science, technology, and society <i>and</i> validly infer potential effects from past and current examples. • Assess the viability and value of past and present perspectives on science, technology, and society based upon available information and inference. • Synthesize and clearly express justified perspectives on STS issues in writing and through other media.

We will also use the California Critical Thinking Skills Test (CCTST) as a measure for development in this capacity. You will take the CCTST twice, once at the beginning of the semester and once toward its end, and your efforts will receive a grade. Your CCTST scores will *not* affect your grade, which will be determined solely by time and effort spent completing the test.

EVALUATION

Distribution

Class-work, quizzes, etc.	10%
Discussion	15%
Midterm Exam	10%
Final Exam	20%
Critical Responses (CT ² artifacts)	30%
Social/Media Project (CT ² artifact)	10%
CCTST completion (2)	5%

Scale

A=90-100%
B=80-89%
C=70-79%
D=60-69%
F=0-59%

Note: Final percentages will not be rounded up.

Grading and Feedback

I will make every reasonable effort to return grades to you as quickly as possible. **Nevertheless, please understand that the university requires grades to be administered only twice in a given semester: once at midterm and once at the end of the semester.** While graded assignments will be returned as soon as possible, understand that you are not entitled to receive grades at any other time in the semester. Not having grades returned at any other time or not having grades returned in what you believe to be a timely fashion fail to qualify as excuses for poor performance. Furthermore, you must understand that “grades” and “feedback” are not at all the same things. Simply put, a grade is a necessary demarcation of your demonstrated competency with course material in relation to class expectations, your peers, and university metrics. Feedback is constructive criticism from me (and even your peers) that works to facilitate your growth, development, and improved performance in assignments and the class. Grades must only be returned twice a semester by university regulation, but feedback is available as often as you request it. However, you, the student, are responsible for requesting and working for the feedback you feel you need beyond what is provided.

CLASS POLICIES

Please note that this document, any semester itineraries, and all other instructional and scheduling documents are subject to revision at the instructor's discretion. Revisions will not be made without timely verbal or written notification of the student. Syllabus addenda have the same authority as this document.

Assignments

All major assignments, writing assignments and exams, must be completed *as specified* to pass the class. Late work without a valid excuse will negatively affect your grade; any extensions must be documented in writing. The instructor determines the validity of excuses for late work, **not** the student. Major written assignments submitted late will lose one letter grade each day (24-hr period) overdue. After three days (calendar days), submissions will not be accepted, and I reserve the right to refuse late work, even if the aforementioned three-day period has not elapsed. Any work done in class (for example, a quiz, an in-class writing assignment, etc.) cannot be made-up in case of absence. Exams can only be made-up if official documentation offering a reasonable explanation is provided.

Work submitted or undertaken for another course (previous or current) cannot be submitted for this course. Doing so is a violation of the Academic Integrity policy and will be penalized accordingly.

Discussion

Active engagement is expected in this class. While I will lecture from time to time, we will spend most of our time in discussion. To do this, you must be able and willing to discuss the material we cover. Being able to engage in discussion requires at least two basic elements. First, you have to actually have ideas to discuss or ideas about the matter being discussed. Actually having thoughts to share in turn requires reading assigned material thoughtfully before it is discussed. You have to know the readings and know them well enough to use them in expressing and supporting your ideas. Second, you have to take time to think about the readings, as well. After all, “reading assigned material thoughtfully” necessarily requires thinking about the given texts. Productive class discussion—the kind that facilitates learning—depends on your coming to class prepared every day. Being willing to engage requires you to act on that preparation and to be responsive to the discussion at hand, both each day in class and over the course of the semester. The participation grade holistically reflects the quality and frequency of your contribution to our learning. You will not earn an *A* in this part of your grade for just sitting in class. Doing this wastes your time, your peers’ time, and my time. Likewise, speaking for the sake of speaking does not count toward your participation grade. Contrary to popular belief, just because an idea is one’s own or is somehow “original” does not make it good or even viable.

To further promote a productive learning environment and to limit distractions, please observe the following rules:

- An assigned text **must** be brought to class every day it is under discussion. Throughout the semester, texts in addition to those purchased will be assigned. These will be accessible through Canvas either locally as electronic files or through web links. **You are required to print these readings and bring the printouts to class.** Not bringing a hard copy of the required reading is grounds for dismissal from class that day, which will be counted as an absence with or without notice.
- You must bring your charged laptop and at least one clean notecard to each class.
- *During* class, ALL electronic devices—phones, laptops, tablets, e-readers, recorders, etc.—are to be turned off or silenced *and* put away. Phones, laptops, and tablets are not to be used in any way or even on your desk during class unless specific instructions require. A student found violating this rule may be reprimanded in class and may be asked to leave, in which case the student will be counted as absent for that class period with or without notification.
- Food and drink—Do not bring food to class; eating in class can be distracting and therefore disruptive. Drinks are allowable as long as these are in keeping with university and building regulations.
- Do not begin packing up to leave until you are explicitly told to do so; our class ends for a given day when our discussion comes to a close, a point I will make clear for you. In addition to hurting your Discussion grade, being disrespectful to your peers and me in this way is also grounds for being marked tardy (see Attendance).
- Remember in discussion that we are all on the same side. Treat your classmates with the same respect you want to receive from them. Do not ignore them, do not interrupt them, and do not attack them. Feel free to disagree with them and me, just do so respectfully and be prepared to give more than just your opinion in rebuttal—you will be required to support your response with evidence. Slurs and epithets will not be tolerated, even in jest.
- Disruptive behavior in class will severely degrade your Discussion grade and therefore your overall course grade. Disruptive behavior includes but is not limited to side conversations, aggression in conversation or

otherwise, sleeping in class, blatant lack of attention, etc. Furthermore, such behavior can result in being marked absent; an absence marked for disruptive behavior counts against your participation and classwork grades, as does arriving late to class or leaving early, which is equally disruptive.

The following descriptive rubric indicates basic expectations for class discussion, though more detailed explanation of evaluation criteria may be provided as necessary:

In addition to abiding by all course policies regarding class participation,

A-range ~ Well-prepared for each class, demonstrating superior previous engagement with the day's course material; contributes to class discussion each meeting and, given the opportunity, frequently leads peers in discussion through thoughtful response to course material and others' commentary; always has required texts on hand;

B-range ~ Prepared for each class, demonstrating previous engagement with the day's course material; contributes to class discussion many meetings and sometimes participates in leading discussion through sustained response to course material, peers, and myself; occasionally contributes to class discussion demonstrating superior engagement and insight regarding course material; always has required texts on hand;

C-range ~ Prepared for each class, showing evidence of having read all assigned material beforehand and bringing said material to class; infrequently contributes to class discussion;

D/F-range ~ Not prepared for class, demonstrating failure to read assigned material beforehand; rarely if ever contributes to class discussion; violates class participation policies given in this document, including but not limited to failing to have required texts on hand.

Attendance

In light of the previous explanation of your participation's importance to our learning, the following attendance policy will be enforced to maintain the integrity of the course. Students are allowed **three** absences. There is no differentiation between "excused" and "unexcused" absences—students can use these allowed absences as they see fit. If you know you will be absent for a particular class or classes, you must plan ahead and use the allowed absences accordingly; understand that no additional absences, "excused" or "unexcused", will be given. **If a student exceeds the allowed absences by the last day to drop, the student will be dropped from the class. After the last drop date, absences beyond the three allowed will limit the student's final grade as follows: with a fourth absence the student can earn no higher than a B in the course; with a fifth absence the student can earn no higher than a C; with a sixth absence, the student can earn no higher than a D; after a sixth absence, the student cannot pass the course.**

University regulation stipulates that "students with an excessive number of absences may be withdrawn at the discretion of the course instructor." Emergency and extended absences will be dealt with on a case-by-case basis, at the instructor's discretion.

Any work done in class on the day of a given absence (for example, a quiz, an in-class writing assignment, etc.) cannot be made-up. If the student provides official documentation providing a reasonable explanation for why he or she could not attend class on the day in question, the missed work will not count against the student's grade. Major assignments such as writing assignments and exams can only be made-up if official documentation is provided offering a reasonable explanation for any absences resulting in missed work. Arriving for class late or leaving early is disruptive to discussion; each recorded instance will count as **one** tardy. Three tardies equal **one** absence. Arriving late or leaving early by more than fifteen minutes will be marked as an absence.

In the case that I do not arrive on time you are expected to wait **fifteen** minutes from the class's official start time. After fifteen minutes you are welcome to leave but are required to check Canvas and your e-mail for information and instructions. If you leave before fifteen minutes have elapsed by **my time** and I arrive, you will be counted absent for that day.

In the case of absences, the student is responsible for maintaining progress in the course regardless of reasons for the absences; in other words, the student, not the instructor, is responsible for collecting (and completing) all assignments. For assignment information, contact your peers or schedule an appointment with me. Do not simply send me an e-mail asking "What did I miss today?"—I will not respond to e-mails of this sort.

Office Hours and Communication

My contact information is listed at the beginning of this document, and my availability and location for appointments is accessible through Canvas>Calendar>Scheduler—be sure to provide a topic(s) or reason(s) for your visit. If you have

any questions or concerns or just want to talk, please schedule an appointment with me during my designated office hours. If for some reason you cannot meet during those times, I am willing to schedule an irregular meeting time, provided my schedule permits. Please allow time for me to respond to such requests. Additionally, please observe the following guidelines for contacting me:

- If you send me an e-mail *before* 4:30 pm Monday-Thursday, I will try to respond that day. Any e-mail sent *after* 4:30 pm or on Friday will be answered on the next business day or at the next available time.
- I do not typically check or respond to e-mail on the weekend or holidays.
- Please keep your communication efficient and professional by following these basic rules:
 - Do not send a reply e-mail (Re:) to a message from me with entirely unrelated information—I assume a reply message is a direct response to the matter addressed in my original message. If you need to tell me something unrelated to my original message, simply send me an original e-mail of your own.
 - Provide an informative subject line.
 - Provide a greeting (my name will suffice).
 - Include your class and section number somewhere in the message.
 - Get to the point but provide as much detail as is necessary for me to appropriately address your concerns.
 - Do not use informal messaging or web-based terms, conventions, etc.—this is not professional communication.

Recording and Copyright Information

Recording of any course communication or discussion by any means other than written note-taking is expressly prohibited. I maintain all rights to disseminated course information, including but not limited to lectures, presentations, syllabi and any syllabi addenda, assignment handouts, etc.

UNIVERSITY POLICIES

Inclement Weather

Here is the policy statement worded by the Scholastic Policies Committee:

Any exam that was scheduled at the time of a class cancellation due to inclement weather will be given at the next class meeting unless contacted by the instructor. Any assignments due at the time of a class cancellation due to inclement weather will be due at the next class meeting unless contacted by the instructor. Any extension or postponement of assignments or exams must be granted by the instructor via email or Canvas within 24 hours of the weather related cancellation.

Statement on Academic Integrity and Plagiarism

In the following is the university statement on academic integrity:

As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a "high seminary of learning." Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form.

Plagiarism is perhaps the most common form of academic misconduct in a class with writing assignments. The university's definition of plagiarism as a form of academic dishonesty includes "the intentional or unintentional copying of language, structure, or ideas of another and attributing the work to one's own efforts" (from *Undergraduate Announcements*). Any violation of the honor code will automatically result in a failing grade for the assignment in question and likely a failing grade for the course, as well. Additionally, I will report any academic misconduct to the university, which may take further action up to and including expulsion. For more information on academic integrity and related policies, visit <http://www.clemson.edu/academics/academic-integrity>

Accommodations for Students with Disabilities

Please speak with me as soon as possible regarding any accommodations you may need for the class. Here is the official statement on such accommodations from the Dean of Undergraduate Studies:

Clemson University values the diversity of our student body as a strength and a critical component of our dynamic community. Students with disabilities or temporary injuries/conditions may require accommodations due to barriers in the structure of facilities, course design, technology used for curricular purposes, or other campus resources. Students who experience a barrier to full access to this class should let the professor know, and make an appointment to meet with a staff member in Student Accessibility Services as soon as possible. You can make an appointment by calling 864-656-6848, by emailing studentaccess@lists.clemson.edu, or by visiting Suite 239 in the Academic Success Center building. Appointments are strongly encouraged – drop-ins will be seen if at all possible, but there could be a significant wait due to scheduled appointments. Students who receive Academic Access Letters are strongly encouraged to request, obtain and present these to their professors as early in the semester as possible so that accommodations can be made in a timely manner. It is the student's responsibility to follow this process each semester. You can access further information here: <http://www.clemson.edu/campus-life/campus-services/sds/>.

Title IX Statement

Here is the official university statement regarding Title IX concerns:

Clemson University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veteran's status, genetic information or protected activity (e.g., opposition to prohibited discrimination or participation in any complaint process, etc.) in employment, educational programs and activities, admissions and financial aid. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972. This policy is located at <http://www.clemson.edu/campus-life/campus-services/access/title-ix/>. Mr. Jerry Knighton is the Clemson University Title IX Coordinator. He also is the Director of Access and Equity. His office is located at 111 Holtzendorff Hall, 864.656.3181 (voice) or 864.565.0899 (TDD).

READING SCHEDULE

The following is a *tentative* schedule and is subject to change. Complete each reading assignment by the class meeting it is listed beside in the “Reading Due” column. The “Discussion” column is left blank for you to record the focus of a given day’s discussion, both anticipated and actual. **Pay close attention to in-class instructions, which may add to or otherwise alter the following.** Texts other than those listed at the beginning of the syllabus are available on Canvas. Additional texts may be and in all likelihood will be assigned throughout the semester to enhance discussion, illustrate course concepts, etc. In addition to all assigned texts (those listed in the following and any others), you must read all accompanying prefacing and introductory material.

Furthermore, it is important that you understand three fundamental aspects of our approach to reading and discussion:

- We will not be discussing the entirety of each text in equal detail (for obvious reasons).
- It is your responsibility both to **keep up with the reading as it is assigned** and to **re-read and study previous material for daily discussion** as instructed.
- The reading schedule—which, again, is subject to change—is provided to set requirements for pace of reading and completion. When the assigned reading and a given day’s focus of discussion are not in sync, that does **not** mean we are behind, ahead, “playing catch-up”, or in any way off-schedule. For example, we may spend a week of class-time discussing the implications of a particular idea in a given text, but you are still responsible for reading as the schedule requires, regardless of place in class discussion. Quizzes will cover the reading listed by the given dates, while exams will only cover material discussed in class.

Week 1

Reading Due by Date	Discussion
W 1/11 Introduction to the class, syllabus, etc.	

Week 2

Reading Due by Date	Discussion
M 1/16 MLK Holiday	

W 1/18 <i>Science, Technology, and the Texture of Our Lives</i> (STTL), Ch. 1	
--	--

January 18 Last day to register or add a class or declare audit

Week 3

Reading Due by Date	Discussion
M 1/23 STTL Ch. 1 cont.	
W 1/25 STTL Ch. 2	

August 30 Last day to drop a class or withdraw from the University without a *W* grade

Week 4

Reading Due by Date	Discussion
M 1/30 STTL Ch. 3	
W 2/1 STTL Ch. 4	

Week 5

Reading Due by Date	Discussion
M 2/6 Review STTL Ch. 1-4	
W 2/8 STTL Ch. 5	

Week 6

Reading Due by Date	Discussion
M 2/13 Stephen Jay Gould, "Sex, Drugs, Disasters, and the Extinction of Dinosaurs" (Canvas) CCTST #1 DUE	Writing Workshop
W 2/15 Christie Aschwanden, "Science Isn't Broken"	

Week 7

Reading Due by Date	Discussion
M 2/20 STTL Ch. 6	
W 2/22 Midterm Review	

Week 8

Reading Due by Date	Discussion
M 2/27 MIDTERM EXAMINATION	
W 3/1 Oscar Handlin, "Science and Technology in Popular Culture"	

March 3 Midterm grades available

Week 9

Reading Due by Date	Discussion
M 3/6 Langdon Winner, "Technologies as Forms of Life"	
W 3/8 Review Winner	

Week 10

Reading Due by Date	Discussion
M 3/13 Neil Postman, "Technology"	
W 3/15 Clive Thompson, "I'm So Totally, Digitally, Close to You"	

March 17 Last day to drop a class or withdraw from the University without final grades

Week 11

Reading	Discussion
M 3/20 – F 3/24 Spring Break	

Week 12

Reading Due by Date	Discussion
M 3/27 Steven Johnson, "How Twitter Will Change the Way We Live"	
W 3/29 Lauren D. LaPorta, "Twitter and YouTube"	

Week 13

Reading Due by Date	Discussion
M 4/3 Dalton Conley, "Wired for Distraction?"	
W 4/5 Stephen Marche, "Is Facebook Making Us Lonely?"	

Week 14

Reading Due by Date	Discussion
M 4/10 Rob Horning, "Social Media, Social Factory"	
W 4/12 TBA	

Week 15

Reading Due by Date	Discussion
M 4/17 TBA	
W 4/19 TBA	

Week 16

Reading Due by Date	Discussion
M 4/24 TBA CCTST #2 DUE	
W 4/26 TBA	

FINAL EXAMINATION

3:00-5:30p Thursday, May 4, in Daniel 205