

STS 1010.008: Survey of Science
and Technology in Society
Fall 2018
TR 12:30-1:45p Watt 313

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This course is an introductory study of science and technology in the 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 “progress” and its promise of a better—best?—world. Progress in the course (meanwhile) 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.

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
<i>These are essential critical thinking skills...</i>	<i>...and this is how we “do” them in STS 1010.</i>
<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. 	<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 are required to take the CCTST twice, once at the beginning of the semester and once toward its end.

GENERAL EDUCATION COMPETENCY

Through daily discussion and course writing assignments, students will “Demonstrate an understanding of issues created by the complex interactions among science, technology, and society,” satisfying the “Science and Technology in Society” competency. Other competencies may also be satisfied: “Communication,” since “Effective oral and written communication is the means by which all competencies will be demonstrated;” and “Critical Thinking”, since students will “Demonstrate the ability to assemble information relevant to a significant, complex issue, evaluate the quality and utility of the information, and use the outcome of the analysis to reach a logical conclusion about the issue.”

REQUIRED TEXTS and MATERIALS

For in-class use, purchase this exact print edition available at the university bookstore and online:

Jennifer Daryl Slack and J. Macgregor Wise. *Culture and Technology: A Primer*. Second Edition. ISBN 9781433107757.

Other **required** readings will be posted in Canvas Files or Canvas Pages. You will also need

- a laptop with connectivity to university networks and Respondus LockDown Browser installed
- plain 3x5 in. notecards (with no easily identifiable features).

GRADING

Quizzes and Classwork	15%	A=90-100%
Discussion	15%	B=80-<90%
Midterm	15%	C=70-<80%
Final	20%	D=60-<70%
Critical Responses	35%	F=0-<60%

Notes: Percentages are not rounded up.

Final grades are posted in iROAR, not Canvas.

Grading and Feedback

I will make every reasonable effort to return grades to you as quickly as possible. **Nevertheless, 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. Poor performance cannot simply be explained away by not having grades returned in what you believe to be a timely fashion. 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 that works to facilitate your development and improved performance in assignments and the class. Grades must only be returned twice a semester by university rule, but feedback is available as often as you request it. However, you are responsible for determining the feedback you feel you need beyond what is provided.

ASSIGNMENTS

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.

Quizzes and Classwork

Frequent quizzes check your reading completion and comprehension of class reading, lectures, and discussion. Quizzes usually cover terms, definitions, and other factual information but may include more complex questions. **Unannounced quizzes strictly follow the reading schedule and only cover reading assigned for completion by that day,** regardless of where we are in class discussion. To find out what an unannounced quiz on a given day may cover, simply look for that date on the schedule and study the reading listed beside it. You should be prepared for a quiz each class meeting:

- Quizzes are administered through Canvas, so you must have a functioning laptop and network connection to take the quiz—no exceptions. Having a mobile device with a network connection (and the Canvas app) as a backup is strongly encouraged, but these devices may not support the Respondus Lockdown Browser.

- Quizzes open at the beginning of class and close five minutes later—no exceptions.
- Quizzes can only be taken in class:
 - If you miss a quiz due to absence or lateness, you miss the quiz and cannot make it up, resulting in a “0” grade.
 - If you come to class to take a quiz and leave early, a “0” grade will be recorded.

Quizzes and classwork cannot be made up for any reason—don’t ask. If you miss a quiz or other in-class assignment for a documented medical emergency or university obligation, that assignment will not count toward your final grade.

Discussion

While I will lecture from time to time, we will spend much of our time in discussion. The Discussion 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. Coming to class with required materials in tow, paying attention, and following instructions—and doing so consistently—are basic expectations for your “job” as a student; in other words, this is average performance, earning no higher than a *C*-range grade. On the other hand, talking just to talk does not aid your Discussion grade. Contrary to popular belief, just because an idea is one’s own or is somehow “original” does not necessarily make it viable or useful for the rest of us. Meaningfully engaging in discussion requires at least two basic elements. First, you have to actually have something worthwhile to say. Actually having something worthwhile to say 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 material, as well. After all, “reading assigned material thoughtfully” necessarily requires thinking about the reading. Productive class discussion—the kind that facilitates learning—depends on your coming to class prepared and willing to act on that preparation in response to the discussion at hand, each day and over the course of the semester.

Exams

Canvas exams assess your knowledge and understanding of course content deriving from class reading, lectures, and discussion. **An exam can only be rescheduled for a documented medical emergency.**

Critical Responses

Analytical, argumentative writing offers you opportunity to practice developing “better” responses to STS questions in an extended “hands-on” manner—to get you to do on your own what we do in class by researching and composing thoughtful responses to given prompts.

CLASS POLICIES

This document and all other instructional and scheduling documents are subject to revision at the instructor’s discretion. To promote a productive learning environment and to limit distractions,

- An assigned text **must** be brought to class every day it is under discussion. Throughout the semester, texts in addition to those listed will be assigned through Canvas. **You are required to print these readings and bring the printouts to class.**
- You **must** bring to each class your laptop, ready for use, and at least one unused notecard.
- *During* class, ALL electronic devices—phones, laptops, tablets, smartwatches, e-readers, recorders, etc.—are to be turned off or silenced *and* put away. These devices are not to be used in any way or even on your desk during class unless specific instructions require.
- Eating and drinking are not allowed in class, due in part to 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.
- Remember in discussion that we are all on the same side. Treat your classmates with the same respect you want to receive from them. Feel free to disagree with them and me, just do so respectfully and be prepared to give more than merely your opinion in rebuttal—you will be required to support your response with evidence.
- 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, bullying or offensive language, sleeping, blatant lack of attention, failing to follow given instructions, etc.

If you violate any of these policies, you may be recorded as absent for that day, with or without notice, and may be dismissed from class. Your Discussion grade will also be penalized.

Attendance

Attendance is mandatory. However, you are allowed to take up to **three** “personal days” without penalty. After those three personal days are used, your final grade incurs a **one-half letter grade penalty** for each additional absence. Keep the following in mind:

- The purpose of the three personal days is to allow for personal emergencies—health, family, etc. If you take a personal day for some other reason, that is your choice. Nevertheless, if you use all your personal days and an emergency arises requiring your absence, **you will have penalized yourself.**
- Situations involving more than three absences require medical or university documentation **for each missed class.**
- An absence may also be recorded for the following reasons, **with or without warning:**
 - Failing to bring a text under discussion to class
 - Being late to class or leaving early by fifteen minutes or more
 - Violating class policy, e.g. sleeping in class, using electronic devices, being otherwise disruptive, etc.
- Being late or leaving early reduces your Discussion grade, and **three** such instances are recorded as an **absence**, with or without warning.
- If you are late, you are responsible for ensuring your presence was recorded **at the end of that class.**
- If I am late to class, you must wait fifteen minutes before leaving.

In the case of absences, you are responsible for maintaining course progress 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 messages 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 are accessible through Canvas Pages (Canvas>[this class]>Pages). Open the appropriate weekly link and sign up for a time that is convenient for you. If for some reason you cannot meet during my posted availability, I am willing to schedule an irregular meeting time, provided my schedule permits. Do allow time for me to respond to such requests. Additionally, be aware that

- For messages sent Monday through Friday afternoon, I will try to respond within 48 hours excluding weekends, holidays, etc., although sometimes this may not be possible.
- I do not typically check or respond to e-mail on weekends or holidays.
- You are expected to be professional in tone and content.

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 course information, including but not limited to the syllabus and any syllabus addenda, assignment handouts, lectures, presentations, etc.

UNIVERSITY POLICIES

Inclement Weather

Here is the policy statement from 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

Here 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. Additionally, I will report 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 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/>. Ms. Alesia Smith is the Clemson University Title IX Coordinator, and the Executive Director of Equity Compliance. Her office is located at 110 Holtzendorff Hall, 864.656.3181 (voice) or 864.656.0899 (TDD).

SCHEDULE

Complete each reading assignment **by** the class meeting it is listed beside. Texts other than those listed at the beginning of the syllabus are available in Canvas. Understand that this is a **tentative** schedule and is subject to change. Additional texts may be and in all likelihood will be assigned throughout the semester to enhance discussion, illustrate course concepts, etc. Furthermore, keep in mind three fundamental aspects of our approach to reading and discussion:

- We will **not** discuss 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**.
- The reading schedule—which, again, is subject to change—is provided to set requirements for pace of reading. When the assigned reading and a given day's discussion are not in sync, that does **not** mean we are behind, ahead, or in any way off-schedule. For example, we may spend a week of class-time discussing a particular idea in a given text, but you are still responsible for reading as the schedule requires, regardless of class discussion.

<u>Class Meeting</u>	<u>Reading to complete BY that class meeting</u>
R 8/23	Introduction to the class
T 8/28	Thomas Oberdan, "Fundamentals" (Canvas Files)
R 8/30	<i>Make It Stick</i> , Ch. 1
T 9/4	Oberdan, "Dynamics"
R 9/6	Stephen Jay Gould, "Sex, Drugs, Disasters, and the Extinction of Dinosaurs"
September 4	Last day to drop a class without a W grade
T 9/11	Christie Aschwanden, "Science Isn't Broken" (Canvas Pages)
R 9/13	Aschwanden cont.
T 9/18	Writing Workshop
R 9/20	Oberdan, "Fundamentals" and "Dynamics" cont.
T 9/25	Oscar Handlin, "Science and Technology in Popular Culture"
R 9/27	Langdon Winner, "Technologies as Forms of Life"
T 10/2	Winner cont.
R 10/4	Jennifer Daryl Slack and J. Macgregor Wise, <i>Culture and Technology: A Primer</i> (C&T), Ch. 1
T 10/9	MIDTERM EXAM
R 10/11	C&T Ch. 2
October 12	Midterm evaluations available
T 10/16	C&T Ch. 2 cont.
R 10/18	Jos de Mul, "The Technological Sublime"
T 10/23	Neil Postman, "Technology"
R 10/25	C&T Ch. 3
October 26	Last day to drop a class without a final grade
T 10/30	C&T Ch. 4
R 11/1	C&T Ch. 3-4 cont.
T 11/6	Fall break
R 11/8	C&T Ch. 5
T 11/13	C&T Ch. 5 cont.
R 11/15	C&T Ch. 6
T 11/20	C&T Ch. 8
R 11/22	Thanksgiving holiday
T 11/27	Rob Horning, "Social Media, Social Factory"
R 11/29	TBA
T 12/4	TBA
R 12/6	TBA
FINAL EXAM	3:00-5:30p Monday, December 10 in Watt 313