

EST 201 - Technological Trends in Society (3 credits)

Lecturer Dr. Edwin Tjoe

Office Hours by Appointment Only

E-Mail: Click on "[Email the Instructor or TA](#)" on the left.

Overview of the course:

We will explore the impact of technology and engineering design on society, past, present and future. We will attempt to find simple, yet powerful principles that govern the relationship between technology and society.

The main themes are technology and industry/economy/the environment/the social, educational and psychological implications/energy and society/war/emerging technologies of the 21st century.

Technology and science are activities of central importance in contemporary life, intimately bound up with society's evolving character, problems, and potentials. If scientific and technological pursuits are to further enhance human well-being, they and their effects on society and the individual must be better understood by non-technical professionals and ordinary citizens as well as by engineers and scientists. Issues of professional ethics and social responsibility confront technical practitioners. At the same time, lawyers, public officials, civil servants, and business people are increasingly called upon to make decisions requiring a basic understanding of science and technology and their ethical, social, and environmental consequences. Ordinary citizens, moreover, are being asked with increasing frequency to pass judgment on controversial matters of public policy related to science and technology in society. These circumstances require education befitting the complex socio-technical character of the contemporary era.

This course is devoted to understanding the natures, consequences, origins, and shaping of technological and scientific activities in modern and contemporary societies. Students in the course study science and technology in society from a variety of perspectives in the humanities and social sciences.

Class Time and Place: See SOLAR

Required Textbook: None (*All course readings will be accessible online or through the university library's academic journals database.*)

Software: The University offers for free Microsoft Office for PC and Apple Users. Do NOT submit work using Pages, Word Perfect or Works.

Learning Objectives:

- Know the history of the information professions and understand the changing roles of information professionals in a global environment.
- Identify and analyze emerging and current trends in technology.
- Promote and demonstrate the use of ethical standards in the creation, management, and use of information.
- Recognize the crucial role of users in the development and delivery of user-centered information systems and services.
- Describe and discuss the ethics, impacts, and consequences of current trends within technology on society.
- Effectively predict attributes, risks, benefits, and trajectory of technological trends.
- Utilize research and metrics to make educated decisions for career growth and specialization through trends in technology.

Introduce students to:

- Major trends in technology with significant impact current on society and the environment.
- Longer range social issues, implications and philosophical ways of looking at technological development: historical, current and future.
- Milestones in technology development: human successes and failures.
- Social, cultural, educational and psychological aspects of technology.
- Thinking, research and discussion of these topics

Social Norms:

- Please be prepared to think and discuss in class.
- Attendance policy: If you are going to miss more than one class, please e-mail the professor explaining why. Attendance is required. Missing classes could hurt your grade. You will miss in-class assignments and lecture material.
- Please do not talk while the lecturer is speaking. There is plenty of opportunity to discuss during the proper context of the course. Sleeping, playing games or other disrespect of the class will NOT be tolerated. Worst-case scenario, the police will be called and have you removed from the building.
- No late assignments will be accepted, unless an excuse is provided to the University for Validation.

- Email: All emails will be answered within 2 business days. When the university is closed, emails will not be responded to till the day school reopens.
- Laptops: Are permitted in class, but if you are caught doing anything not pertaining to the course you will be asked to turn off the device.
- Recording: Audio/Visual recording of the lecture is not permitted unless it is approved by DSS.
- Cell Phones: No cell phone use in class is permitted at all.

Class Structure:

Discussions are comprised of: watching/listening to a podcast from Ted/PBS/iTunes University; answering a weekly reflection question; and articulating to the class in discussion why you think your reflection is correct.

- **You are required to: (1) reply to the discussion board topic/question by creating a thread** (two paragraphs), and **(2) make three responses to other students** (one paragraph, each). That is a total of 4 required responses. A paragraph is at least 5 sentences long. Don't forget to cite your resources.
- You will be expected to actively participate in all group discussions. Active participation means providing meaningful expression and well thought out answers to instructor questions. A short answer like "I agree or disagree" does not constitute meaningful dialogue and will not be counted toward your participation grade.
- Each discussion will have a beginning and ending date. Posting after the discussion's ending date and time will not be graded. You are, however, allowed to miss one discussion board week in total.

Exams are based on course readings, podcasts, notes, videos, and lectures. Any extra credit in class is subject to whatever tentative rules are dictated by the instructor with no exceptions.

All discussions deadlines, assignment due dates, exam dates, and lecture numbers are listed in the Course Calendar (to the left) on the class's Blackboard page.

You can access class information on-line at: <http://blackboard.stonybrook.edu>. Blackboard is the University's Web-based course management system. It enables you to access syllabi, course-related materials, assignments, assessments, and communication features provided by your instructor. All registered students (undergraduate and graduate) receive a Blackboard account at the beginning of their first semester at Stony Brook. To access Blackboard, go to <http://blackboard.stonybrook.edu> and log in using your NetID username and password.

Student Responsibilities

By accepting responsibility for their education, students enhance the development of their academic, social, and career goals. It is expected that students accept responsibility for their academic choices as part of their educational experience at Stony Brook. Services are available to assist students with academic advising, long-range goals, and career exploration. Students are responsible for reviewing, understanding, and abiding by the University's regulations, procedures, requirements, and deadlines as described in official publications, including, by way of example only, this Undergraduate Bulletin, the University Conduct Code, the Student Handbook, and class schedules.

Responsibilities in the Classroom

Students are expected to attend class regularly unless other arrangements are made; arrive for class on time and leave the classroom only at the end of class; engage in class discussions and activities when appropriate; exhibit classroom behavior that is not disruptive of the learning environment; secure and turn off all electronic communications and entertainment devices during class time unless otherwise directed by the course instructor. Any use of a cell phone or other unauthorized electronic device during an examination may lead to an accusation of academic dishonesty.

Absentee Policy

Students are expected to report for their examinations and major graded coursework as scheduled. If a student is unable to report for any examination or to complete major graded coursework on time, the student must contact the faculty member immediately. If the student cannot reach the faculty member, then s/he should contact the Director of Undergraduate Studies.

Although faculty will consider each student's request on its own merits and not attempt to define ahead of time the validity of all possible reasons a student might give for missing an examination or the date to turn in major graded coursework, instructors are expected to accept an excuse of significant illness, tragedy, or other

personal emergencies and to make reasonable alternative accommodations for the student. It shall be the student's responsibility to provide sufficient documentation to support any such request. Accommodations for other reasons will be at the discretion of the faculty.

Course Responsibilities

Students are expected to observe the requirements for the course and consult with the instructor if prerequisites are lacking; obtain and understand the course syllabus; keep up with the coursework and take all scheduled examinations; address any conflicts in syllabus and exam scheduling with the instructor as soon as possible; review all graded material and seek help if necessary; notify the instructor as soon as possible of any disabilities that might interfere with completion of coursework; complete the course evaluation form fairly and thoughtfully.

Academic Progress

Students are expected to take an active part in assessing their academic progress each semester, and to monitor their progress towards completion of graduation requirements. They are expected to review academic policies and procedures described in the current Undergraduate Bulletin and its Supplements; know basic University, college, and departmental graduation requirements in their chosen majors and minors so they may plan completion of these requirements; maintain personal copies of a tentative degree plan, progress reports, general educational material, and transfer credit evaluations until after graduation; see that any academic records from other universities are transferred and received by all the appropriate offices (Admissions and Academic and Transfer Advising Services Office) for evaluation.

Interactions with Faculty, Instructors, and other Students

Students are expected to understand the concept of academic honesty and adhere to its principles; be respectful and polite to all instructors and other students; be familiar with and abide by the University's sexual harassment policies as well as University policies regarding consensual relationships between instructors and students; consult the Student Conduct Code about other aspects of student conduct in and out of the classroom.

Assignments:

1. Weekly web-based discussions using Blackboard about controversial issues involving technology
2. Term Paper
3. Multiple choice exams
4. Attendance Activity: Based on online participation of discussion.

Evaluation:

- 5% Attendance
- 45% Weekly Blackboard Group Discussions: Podcast/Movie/Recording
- Transcripts of all audio/video are available.
 - 10% Term Paper
 - 20% Exam One
 - 20% Exam Two

Assessment Rubrics:

Discussions and Term Paper: Association of American Colleges & Universities VALUE Rubrics

VALUE (Valid Assessment of Learning in Undergraduate Education) is a campus-based assessment approach developed and lead by AAC&U as part of its [Liberal Education and America's Promise \(LEAP\) initiative](#). VALUE rubrics provide needed tools to assess students' own authentic work, produced across students' diverse learning pathways, fields of study and institutions, to determine whether and how well students are meeting graduation level achievement in learning outcomes that both employers and faculty consider essential. Teams of faculty and other educational professionals from institutions across the country—two- and four-year, private and public, research and liberal arts, large and small—developed rubrics for sixteen Essential Learning Outcomes that all students need for success in work, citizenship, and life. The VALUE rubrics are being used to help institutions demonstrate, share, and assess student accomplishment of progressively more advanced and integrative learning.

Since their release in the fall of 2009, the rubrics have become a widely referenced and utilized form of assessment on campuses across the United States and internationally. As of December 2015, the rubrics have been accessed by more than 42,000 individuals from more than 4,200 unique institutions, including more than 2,800 colleges and universities. The VALUE rubrics have also been approved for use in meeting national standards for accountability established by the Voluntary System of Accountability (VSA), and are used in all regional and some professional self-study reports and reviews for accreditation.

The VALUE rubrics include Inquiry and Analysis, Critical Thinking, Creative Thinking, Written Communication, Oral Communication, Quantitative Literacy, Information Literacy, Reading, Teamwork, Problem Solving, Civic Knowledge and Engagement—Local and Global, Intercultural Knowledge and Competence, Ethical Reasoning and Action, Global Learning, Foundations and Skills for Lifelong Learning, and Integrative Learning.

Critical Thinking VALUE RUBRIC

Definition

Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.

Framing Language

This rubric is designed to be transdisciplinary, reflecting the recognition that success in all disciplines requires habits of inquiry and analysis that share common attributes. Further, research suggests that successful critical thinkers from all disciplines increasingly need to be able to apply those habits in various and changing situations encountered in all walks of life.

This rubric is designed for use with many different types of assignments and the suggestions here are not an exhaustive list of possibilities. Critical thinking can be demonstrated in assignments that require students to complete analyses of text, data, or issues. Assignments that cut across presentation mode might be especially useful in some fields. If insight into the process components of critical thinking (e.g., how information sources were evaluated regardless of whether they were included in the product) is important, assignments focused on student reflection might be especially illuminating.

Glossary

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- **Ambiguity:** Information that may be interpreted in more than one way.
- **Assumptions:** Ideas, conditions, or beliefs (often implicit or unstated) that are "taken for granted or accepted as true without proof." (quoted from www.dictionary.reference.com/browse/assumptions)
- **Context:** The historical, ethical, political, cultural, environmental, or circumstantial settings or conditions that influence and complicate the consideration of any issues, ideas, artifacts, and events.
- **Literal meaning:** Interpretation of information exactly as stated. For example, "she was green with envy" would be interpreted to mean that her skin was green.
- **Metaphor:** Information that is (intended to be) interpreted in a non-literal way. For example, "she was green with envy" is intended to convey an intensity of emotion, not a skin color.

	Capstone 4	Milestones		Benchmark 1
		3	2	
Explanation of issues	Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.	Issue/problem to be considered critically is stated without clarification or description.

<p>Evidence <i>Selecting and using information to investigate a point of view or conclusion</i></p>	<p>Information is taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.</p>	<p>Information is taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.</p>	<p>Information is taken from source(s) with some interpretation/evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.</p>	<p>Information is taken from source(s) without a interpretation/evaluation. Viewpoints of experts are taken as fact, without questioning.</p>
<p>Influence of context and assumptions</p>	<p>Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.</p>	<p>Identifies own and others' assumptions and several relevant contexts when presenting a position.</p>	<p>Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).</p>	<p>Shows an emerging awareness of present assumptions (some labels assertions as assumptions). Begins to identify some contexts when presenting a position.</p>
<p>Student's position (perspective, thesis/hypothesis)</p>	<p>Specific position (perspective, thesis/hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/hypothesis).</p>	<p>Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/hypothesis).</p>	<p>Specific position (perspective, thesis/hypothesis) acknowledges different sides of an issue.</p>	<p>Specific position (perspective, thesis/hypothesis) stated, but is simple and obvious.</p>
<p>Conclusions and related outcomes (implications and consequences)</p>	<p>Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.</p>	<p>Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.</p>	<p>Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.</p>	<p>Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.</p>

Appendix A

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 are 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>.

Academic 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 are 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 Statement:

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs 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.

Student Participation in University-Sponsored Activities

By their participation in campus-related activities such as research conferences, dramatic or musical performances, intercollegiate athletic competitions, or leadership meetings, students make contributions to the University. In recognition of the students' commitment both to their regular academic programs and to related activities, the University makes every effort to accommodate unique situations.

Students are responsible for presenting a printed copy of semester obligations to all their professors at the beginning of the semester to alert them to activities that may present conflicts. Instructors are required to make arrangements for students to complete examinations, quizzes, or class assignments early or late if the student's participation in a University-related activity results in the student's absence from the class when such work is due. Some events occur only by invitation during the semester, and instructors should make accommodations for these students.

Just in Case Statements:

In cases of a family member's death or a student's own medical issues, "Student Affairs (Ellen Driscoll) will write to faculty on behalf of the Dean of Students office when a student is going to be out of class for an extended period of time due to illness or family death/matter.

The only University policy on a truly excused absence is in the event of an athletic commitment (for student athletes) or for religious observance. For all other requests for accommodations, professors should ask students for verifying information (i.e., death certificate, obituary, funeral program, medical documentation, etc.) It is not acceptable if you book a flight or vacation early and can't take an exam. The course calendar is posted. It's your responsibility to make sure you are present for all your university classes including final exam week. Regardless if there is a good deal on the internet.

The materials in this course available online or via a website link are for the exclusive use of registered students currently enrolled in this course and may not be further distributed. In addition to legal sanctions, violation of these copyright prohibitions may result in university disciplinary action.