

SAN JOSE STATE UNIVERSITY
Department of Aviation and Technology
CMPE/ME/ENGR/TECH 198-83
Technology and Civilization
Syllabus Fall 2018
REVISED 9-20-18

Instructor: Patricia Ryaby Backer **Phone:** 924-3214
EMAIL: pat.backer@sjsu.edu
Office: Engr 491
Location: online
Office hours: Please email me for an appointment.

In Fall 2018, this section of Tech 198 (Section 83) will be caught as an online class More details about the structure of the class are given below.
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This class meets the SJSU Studies Area V requirement

Catalog Description

History, development, and use of technology in different cultures. Technology's impact on society, global environment, the workplace, cultural values, gender roles, and newly industrialized countries of the world. (Prereq: Upper division standing, passage of WST and CORE GE). 3 units.

Prerequisite: For students beginning continuous enrollment in Fall 2005 or later, completion of, or co-registration in, a 100W course is required for enrollment in all SJSU Studies courses. Courses used to satisfy Areas R, S, and V must be taken from three separate SJSU departments, or other distinct academic units {having own HEGIS Code}).

Purpose of Course

Technology and Civilization is an SJSU Studies course in Area V: Culture, Civilization & Global Understanding that is designed to introduce students to the realm of history and usage of technology in society from an international perspective and to increase their awareness of both the uncertainties as well as the promises of the utilization of technology as a creative human enterprise. TECH 198 provides a comprehensive overview of the human dimension of technological change as it continually molds and shapes the nature of our culture, social institutions, and the global environment.

While science and technology are often decried as pervasive agents of social change, this course focuses on the role individuals can play in the management and control of technological forces toward human achievement. Emphasis is given to the chronology of technology and its role in shaping human history. The perspective is to regard technology both as affecting and being affected by culture. This focus should help you broaden your view of technology and its role and effect on society. This course builds upon basic skills in reading, writing, speaking, critical thinking, and research; and knowledge from Core GE to give you a comprehensive view of the interaction of technology and society.

General Course Goals for Tech 198

1. Analyze the concepts of science and technology in contemporary society (Unit 1 multimedia activities on science and technology)
2. Compare the development and use of technology in various countries around the world (Research Exercise).
3. Analyze the interactions between gender, culture and technology in the history of technology (Unit 4 multimedia activities on Gender and Technology).
4. Investigate the societal and technological relationships between technology and work (Unit 3 multimedia activities on Technology and Work).
5. Analyze the mechanisms of technology transfer and its effects on other countries (technology transfer class activities)
6. Analyze technological developments, issues, and trends with respect to how these have altered the overall quality of life (QOL) in the United States and in other nations (QOL class activities).
7. Review several contemporary technology innovations and developments and the ethics associated with responsible technology decision-making both for the United States as well as for other countries (Ethics class activities).

Student Learning Objectives for Area V of SJSU Studies (Advanced GE)

Students shall be able to:

1. compare systematically the ideas, values, images, cultural artifacts, economic structures, technological developments, and/or attitudes of people from more than one culture outside the U.S.;	The Research Exercise will assess this learning objective. In addition, the following multimedia activities relate to this learning objective: Attitudes of, and about, women in technology (Section 5—Technology and Gender), Women working around the world (Section 4—Technology and Gender).
2. identify the historical context of ideas and cultural traditions outside the U.S. and how they have influenced American culture;	The web-based unit on the history of technology addresses this learning objective. Several sections of the Canvas course relate to this learning objective: Assembly line (Section 5—Technology and work), The Nature of Work Today (Section 7—Technology and work)
3. explain how a culture outside the U.S. has changed in response to internal and external pressures.	The final exam addresses this SLO. Also, several sections of the Canvas course address this learning objective: The Industrial Revolution (Section 1—Technology and work), The Industrialization of Society in the 19 th century (Section 2—Technology and work), Unit 5 Technology Transfer Part 2 Homework.

Other Materials

(1) *Criterion*: For this class, you will need to log into the class website on the Criterion® Online Writing Evaluation Service. The Criterion® Online Writing Evaluation service provides students with reliable evaluations of English-language essays. It delivers immediate score reporting and diagnostic feedback that students can use to revise and resubmit their essays. To access Criterion, you should go to the website, <https://criterion.ets.org/student/> and log in. The Class Full Name is Fall 2018 Tech 198 Section 80, and the class access code is 7N5Q - Z2WW

(2) *Canvas Activities*. All of the units in this class are available online on the CANVAS

website. In each of these units, you will have homework/classwork activities. The CANVAS activities are available on the class website. There are two different versions of the multimedia available: a Canvas version and a Word version. **All videos, articles and other media are available Canvas.**

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of forty-five hours over the length of the course (normally 3 hours per unit per week with 1 of the hours used for lecture) for instruction or preparation/studying or course related activities including but not limited to internships, labs, clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.

Evaluation

- | 1. Weighted Criteria | Percentage |
|---|------------|
| a. Unit Activities. Each unit includes Zoom activities/quizzes, unit activities, discussion questions, and responses. | 45 |
| b. Research Exercise | |
| Thesis statement with Uploaded articles | 5 |
| First draft of RE1 with Criterion check | 15 |
| Final version of RE 1
(minimum 1000 words, approx. 4 pages D.S.) | 25 |
| d. Final Exam (Oral presentation) | 10 |
2. Due dates are listed on the attached Course Schedule. Reading assignments that are pertinent to individual units are listed on the Course Schedule. It is your responsibility to keep current and read all relevant assignments before they are used in class.
 3. **No assignments will be accepted late.** Exceptions will be made to this policy only in **emergency situations.** Please call or email Dr. Backer as soon as possible.
 4. Correct use of English is a fundamental requirement for your papers to be graded. If errors in English make it difficult for your instructor to understand your sentences or excessively slows down the grading, your paper will be returned to you for further work on its English, and your grade for the paper will be deferred until it is resubmitted with corrected English. If your assignment is returned for an excessive number of grammatical errors, you will be allowed to rewrite and resubmit it within two weeks of the original return date. If not resubmitted by the date set by your instructor, you will receive a zero (0) for the writing assignment.
 5. Grade distribution. The final grade distribution will be as follows: 93-100 A; 90-92 A-88-89 B+; 83-87 B; 80-82 B-; 78-79 C+; 73-77 C; 70-72 C-; 69 D+; 65-68 D; below 65 F
 6. This greensheet is subject to change with fair notice.

Description of Major Activities in this Course

Unit Activities

The class work portion of your grade includes all individual written activities completed online as well as activities completed during the Zoom meetings. Additionally, this category includes any homework, quizzes, and/or ancillary assignments. Over the course of the semester, you will write the equivalent of at least ten pages, double-spaced. The Unit activities include all Canvas activities.

All of the units in this class are available online on the CANVAS website. These six units are: Unit 1—The Nature of Science and Technology, Unit 2—The History of Technology, Unit 3—

Technology and Work, Unit 4—Technology and Gender Issues, Unit 5--Technology Transfer and Cultural Issues, Unit 6—Quality of Life Issues, and Unit 7--Ethics. In each of these units, you will have homework/classwork activities. The CANVAS activities are available on the class website.

Research Exercise

In this class, you must complete one research paper. The research exercise will require you to compare technological developments from at least two different countries, focusing on renewable energy. The narrative for each of the research exercises must be at least 4 pages double-spaced (minimum of 1,000 words each). Detailed instructions for the research exercise are available on the CANVAS website. Please review these instructions and email your professor if you have any questions.

*All research exercises should be submitted first to **ETS Criterion** before submitting them to me.*

Research Exercise Due Dates

- **9/18/18, Thesis Statement and Research Articles Due.** You should upload your thesis statement to Canvas by 6 pm. Also, you must upload all of your reference articles by 6:00 pm.
- **10/26/18, Research Exercise Draft DUE:** By 6:00 pm, you must submit your rough draft to Criterion AND to the CANVAS dropbox. Also, you must upload any additional reference articles to Canvas by 6:00 pm.
- **11/9/18:** You will receive content feedback on your essay from Dr. Backer.
- **11/26/18, Research Exercise Final Paper DUE:** you must submit your final draft to Criterion AND to the CANVAS dropbox. Also, you must upload any additional reference articles by 6:00 pm.

Final Exam (Oral Presentation)

Your final exam will be a Powerpoint presentation. More information about the exam is available on the **CANVAS** website for this class.

Class Format

Tech198 is organized as a series of units or instructional topics. Within each unit there are objectives, assigned readings, activities, media, and evaluation measures. ***The units are NOT covered in the order they are listed here. Check the course schedule and the CANVAS course web site for the order and dates for each unit.*** Your instructor is hopeful that you will ultimately become enthusiastic about the material presented within the realm of this field, and that you will be willing to share your ideas with your fellow classmates throughout the coming term.

Outline of Course Content and Unit Objectives

Unit 1: Nature of Science & Technology

Objectives:

- a. Contrast the concepts of science and technology.
- b. Describe the evolution of “modern science” as a Western construct.
- c. Investigate several prevailing attitudes toward technological changes and innovations.
- d. Illustrate examples of technology dependence and technology traps.

Unit 2: The History of Technology and Culture

Objectives:

- a. Analyze the development of technology over time and in different cultures.
- b. Synthesize the contributions of China and Islam to modern science and technology.
- c. Compare Western and non-Western contributions in the history of technology.

Unit 3: Technology and Work

Objectives:

- a. Investigate how work has evolved since the Industrial Revolution and how technology has influenced this evolution in the US and in other countries.
- b. Describe the changes in technology and work since the Industrial Revolution and the interplay of this history with other significant historical events.
- c. Analyze the effect of the work environment on different groups in society throughout the history of "modern work."
- d. Discuss the nature of industrial work in the Twentieth Century?

Unit 4: Technology and Gender Issues

Objectives:

- a. Characterize the gender-related contexts of technology development.
- b. Synthesize the stereotypes of "men's work" and "women's work" as they relate to technology.
- c. Contrast how work in the home has evolved as compared to work in the marketplace.
- d. Describe the evolving role of women in society since the beginning of the 20th century and how technology has affected this development.
- e. Analyze the effects of technology on women from different cultures and societies.

Unit 5: Technology Transfer and Cultural Issues

Objectives:

- a. Discuss the culture-related contexts of technology development.
- b. Describe the mechanisms of technology transfer.
- c. Analyze possible uses of technology transfer among countries.
- d. Compare technological problem solving using "technology fixes" versus social engineering.

Unit 6: Quality of Life Issues

Objectives:

- a. Describe those elements that are essential to the QOL in societies around the world.
- b. Contrast opposing points of view to determine the effects of technology on the environment.
- c. Describe the impact of technology on the quality of life of people from different countries

Unit 7: Technology Ethics and Society

Objectives:

- a. Review several contemporary technology innovations and developments and the ethics associated with responsible technology decision-making.
- b. Analyze the effect of information technology on individual and workplace privacy.

**Schedule Tech 198, Section 83
Fall 2018**

Week	Date	Unit	Topic	Assignments
1	8/30/18 at 12 pm (noon)			Zoom meeting with Dr. Backer to discuss Unit 1
1	9/4/18 at 6 pm		Introduction	Online discussion: Introduce yourself to the class
1	9/4/18 at 6 pm		Plagiarism	Upload certificate from online plagiarism test (see Canvas)
2	9/4/18 at 12 noon			Zoom quiz for Unit 1
2	9/4/18 at 6 pm	1	The Nature of Science and Technology	Unit 1 Canvas Homework due to Dr. Backer by 6:00 pm
2	9/6/18 at 12 pm noon			Zoom meeting for Unit 2—History of Technology
3	9/10/18 at 12 pm noon			Zoom quiz for Unit 2
3	9/11/18 at 6 pm, extended to 9/15 at midnight	2	History of Technology	Unit 2 Canvas Homework due to Dr. Backer by 6:00 pm
3	9/13/18 at 10:30 am			Zoom meeting about research exercise
4	9/18/18 at 6 pm			Submit thesis statement and all reference articles to Canvas
4	9/20/18 at 12 pm noon			Zoom meeting for Ethics Module
5	9/24/18 at 12 pm noon			Zoom quiz for Ethics Module
5	9/25/18 at 6 pm	7	Technology and Ethics	Homework assignment due to Dr. Backer by 6:00 pm
5	9/27/18 at 9 am			Zoom meeting for Unit 3A—Technology and Work, Part 1
6	10/1/18 at 12 pm noon			Zoom quiz for Unit 3A
6	10/2/18 at 6 pm	3	Technology and Work, Unit 3, Part 1	Unit 3A Canvas Homework due to Dr. Backer by 6:00 pm
6	10/4/18 at 9 am			Zoom meeting for Unit 3B—Technology and Work, Part 2
7	10/8/18 at 12 pm noon			Zoom quiz for Unit 3B
7	10/9/18 at 6 pm	3	Technology and Work, Unit 3, Part 2	Unit 3B Canvas Homework due to Dr. Backer by 6:00 pm
7	10/11/18 at noon			Zoom meeting Technology Transfer
8	10/15/18 at 12 pm noon			Zoom quiz for Technology Transfer module

8	10/16/18 at 6 pm	5	Technology Transfer	Homework assignment due to Dr. Backer by 6:00 pm
9	10/26/18 at 6 pm			Research Exercise Draft Paper due
10	11/1/18 at noon			Zoom meeting Unit 4: Gender Issues, Part A
11	11/5/18 at 12 pm noon			Zoom quiz Gender Issues, Part A
11	11/6/18 at 6 pm	4	Gender and Technology	Unit 4A Canvas Homework due to Dr. Backer by 6:00 pm
11	11/8/18 at noon			Zoom meeting Gender Issues, Part B
12	11/12/18 at 12 pm noon			Zoom quiz Gender Issues, Part B
12	11/17/18 at 6 pm	4	Gender and Technology	Unit 4B Canvas Homework due to Dr. Backer by 6:00 pm
13	Thanksgiving break 11/21-11/25. No assignments due			
14	11/26/18 at 6 pm			Final version Research Paper due
14	11/29/18 at noon			Zoom meeting Quality of Life
15	12/3/18 at 12 pm noon			Zoom quiz for Quality of Life module
15	12/4/18 at 6 pm	6	Quality of Life	Discussion board assignment due 6:00 pm
16	12/14/18 at 6 pm			Final exam due