Course Description: This course introduces conceptual and theoretical frameworks and provides empirical case studies that contribute to understandings of science and technology as they are used in society. The applications of science and technology in society need to be understood as instrumental to the creation and maintenance of inequality within and between societies, affecting social, economic, environmental, psychological and political relationships between different groups of people. These differences are compounded through differences that are racialized, gendered, and class-based. Science and technology does not merely cause or alleviate inequality, but are more profoundly implicated in social relations regarding distribution and access to the benefits of different technologies as well as exposure to risks from science and technology projects in society. The more pervasive and obdurate sources of social distribution are enshrined and entrenched in these scientific and technological systems.

“Inequality” is an important divide to explore in relation to science and technology. We will discuss inequality in relation to several different value systems by examining theories of ethics and justice using classical and modern theorists. Our communal definitions of inequality will involve distribution, recognition, and participatory justice ideals, which we will use to interrogate how different cultural groups value incommensurable components of life such as income, health, and power. In this course, the term “distribution” is used in its dynamic sense, which refers to the process of producing and re-producing inequalities through the design and engineering of everyday objects that are informed by social values, and that also shape social relationships. This course is concerned with the roles that science and technology play in those processes and ways in which one can recognize the origins of, and intervene to generate fewer, unequal outcomes, as well as how vulnerable communities resist and contest unequal distributions of risks from the implementation of these technologies, such as the Navajo Nation and the coal and renewable energy industries, urban Latino communities and transportation systems, and poor communities of color in the Southeastern US who ignited the environmental justice movement in response to persistent chemical dumping. Ultimately, this course aims to provide students with a greater understanding of the processes that contribute to the increase of inequality through the role of science and technology in society.

Course Objectives and Learning Outcomes: Students will be able to:
- Develop understanding about the complex ways that science, technology, and engineering are informed by social values and cultural biases, exacerbating inequality and inequity in society, especially amongst different racial, ethnic, class, religious, and gender groups.
- Comprehensively compare different cultural approaches and worldviews in relation to science and technology, including the policy-making and regulatory processes governing technological design, introduction, and implementation.
- Develop critical thinking skills and the ability to question how scientific, environmental, and technological relationships affect different communities on local, state, regional, national levels in the United States, and how they are developed in a comparative international context.
- Gain understanding and competency in researching and describing how inequality originates in disparate cultural value systems and how it affects marginalized and vulnerable populations by using theoretical aspects of justice theory and the field of ethics.
- To develop student’s skills in oral and written communication, through group discussions, weekly assignments, and individual projects, in order to increase efficacy of student’s communication and understanding of environmental, scientific, and technological principles.
- To learn practical and practicable ideas and theories about social change and scientific practices as they pertain to concepts of environmental justice.

Course Requirements:

Weekly Reflection Blog Post: 12 total (60%)
Each week, students will bring in one article (from a newspaper, journal, or magazine) that relates to the subject we are discussing in class. We will be discussing the relationship between these short articles and the class topic in our weekly seminars. In the weekly blog post, students will discuss the readings from the week, and relate them to your personal experience and this outside research (including 2 bibliographic references) in order to demonstrate understanding and relevancy of this topic. The blog post will be about 500 words in length each week. (The grade for your blog post will reflect attendance and the article you bring in for class.)

Paper Assignments: 40% (20% each)
During the course of the semester, students will write two 4-5 page papers, choosing a topic we’ve discussed in class to delve further into for the first paper, and a paper on their own topic for the final paper, to further develop an argument about the complex relationship between inequalities and a scientific or technological development.

Barrett students interested in adding an honors contract to the class should contact the instructor in the first week of class.

Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>A- / A/ A+</td>
<td>90.0-92.4/ 92.5-97.9/ 98-100</td>
<td>Excellent</td>
</tr>
<tr>
<td>B- / B/ B+</td>
<td>80.0-82.4/ 82.5-87.4/ 87.5-89.9</td>
<td>Good</td>
</tr>
<tr>
<td>C/ C+</td>
<td>70.0-77.4/ 77.5-79.9</td>
<td>Average</td>
</tr>
<tr>
<td>D</td>
<td>60.0-69.9</td>
<td>Passing</td>
</tr>
<tr>
<td>E</td>
<td>&lt;60</td>
<td>Failure</td>
</tr>
<tr>
<td>XE</td>
<td></td>
<td>Failure due to Academic Dishonesty</td>
</tr>
</tbody>
</table>

[Note: in order to receive University Distribution requirement credit you must earn at least a “C.”]

Course Calendar
This syllabus is subject to change. It is your responsibility to read e-mail updates from the instructor and TAs as well as check the blackboard site for alterations made as events occur.

Week 1: Why ST & I?  
(Post to “Hallway Conversations” by Monday)


Week 2: Environmental Racism and Urban Development (Post #1 due Monday)


Week 3: Roots of Technology as Social Progress (Post #2 due Monday)


Week 4: Indigeneity and Technological Development (Post #3 due Monday)


Week 5: Producing New Natures (Post #4 due Monday)


Week 6: Inequality and Income (Post #5 due Monday)


Week 7: Feeding the Masses (Post #6 due Monday)

Week 8: Gendered Divides (Post #7 due Monday)

Week 9: Spring Break (no class). Work on paper outlines!
**Week 10: Climate Change and Vulnerability**


Rachel Pike, “The Science Behind a Climate Headline.”
http://www.ted.com/talks/rachel_pike_the_science_behind_a_climate_headline

**Week 11: Race and Categorization**  
(Post #8 due Monday)


**Week 12: The Digital Divide and Science Policy**  
(Post #9 due Monday)


**Week 13: Energy and Environmental Values - The Nuclear Fuel Cycle**  
(Post #10 due Monday)


**Week 14: Energy Systems and Inequality - Solar Energy**  
(Post #11 due Monday)

**Week 15: Technology and the Future**  
(Post #12 due Monday)

**Week 16: Final Papers Due**

**Incompletes:** A mark of "I" (incomplete) can be given by the instructor when you are otherwise doing acceptable work but are unable to complete the course because of illness or other conditions beyond your control. You are required to arrange with the instructor for the completion of the course requirements. The arrangement must be recorded using the form at [http://students.asu.edu/forms/incomplete-grade-request](http://students.asu.edu/forms/incomplete-grade-request). Students should be proactive and discuss this with their instructor and TA before the end of the semester. Students who do not complete this form before the end of the semester cannot be given an incomplete and will be awarded a grade based on the work they have completed.
Late Assignments: Late assignments will have 1/3rd of a letter grade deducted each day they are late. Advanced written or e-mailed notice that you will miss a class or have to turn in an assignment late could help your cause.

Grade Appeals: ASU has formal and informal channels to appeal a grade. If you wish to appeal any grading decisions, please see: http://catalog.asu.edu/appeal

Student Standards: Students are required to read and act in accordance with university and Arizona Board of Regents policies, including: The ABOR Code of Conduct: Arizona Board of Regents Policies 5-301 through 5-308: http://www.azregents.edu/policymanual/default.aspx

Professionalism in the Classroom: While learning happens throughout ASU, the classroom is a particularly important focal point. Students are asked to contribute to a collegial atmosphere where ideas can be exchanged, discussed, and debated freely by avoiding disruptions through their own behavior and the distractions of their technology. Disruptive, threatening or violent behavior will be dealt with according to the policies in the Student Services Manual, SSM 104–02. Students wishing to record lectures electronically must first get permission from the instructor.

It is impossible to learn from your fellow students when you or they are not there. As such attendance is required in this course. Should you have to miss a class, contact your instructor as far in advance as possible. Depending on the nature of the absence the instructor may elect to deduct points from your overall grade. Absences can be excused for religious observances or practices that are in accord with ACD 304–04 or university sanctioned events/activities that are in accord with ACD 304–02.

Academic Integrity: Academic honesty is expected of all students in all examinations, papers, laboratory work, academic transactions and records. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification and dismissal. For more information, see http://provost.asu.edu/academicintegrity.

If you fail to meet the standards of academic integrity in any of the criteria listed on the university policy website, sanctions will be imposed by the instructor, school, and/or dean. Academic dishonesty includes borrowing ideas without proper citation, copying others’ work (including information posted on the internet), and failing to turn in your own work for group projects. Please be aware that if you follow an argument closely, even if it is not directly quoted, you must provide a citation to the publication, including the author, date, and page number. If you directly quote a source, you must use quotation marks and provide the same sort of citation for each quoted sentence or phrase. You may discuss assignments with other students, however, all writing that you turn in must be done independently. If you have any doubt about whether the form of cooperation you contemplate is acceptable, ask the TA or the instructor in advance of turning in an assignment. Please be aware that the work of all students submitted electronically can be scanned using SafeAssignment, which compares them against everything posted on the internet, online article/paper databases, newspapers and magazines, and papers submitted by other students. Turning in an assignment (all or in part) that you completed for a previous class is considered self-plagiarism and falls under these guidelines. Any infractions of self-plagiarism are subject to the same penalties as copying someone else’s work without proper citations. Students who have taken this class previously and would like to use the work from previous assignments should contact the instructor for permission to do so.

Prohibition of Commercial Note Taking Services: In accordance with ACD 304-06 Commercial Note Taking Services, written permission must be secured from the official instructor of the class in order to sell
the instructor's oral communication in the form of notes. Notes must have the note taker's name as well as the instructor's name, the course number, and the date.

**Student Support and Disability Accommodations:** In compliance with the Rehabilitation Act of 1973, Section 504, and the Americans with Disabilities Act of 1990, professional disability specialists and support staff at the Disability Resource Center (DRC) facilitate a comprehensive range of academic support services and accommodations for qualified students with disabilities. **Qualified students with disabilities may be eligible to receive academic support services and accommodations.** Eligibility is based on qualifying disability documentation and assessment of individual need. Students who believe they have a current and essential need for disability accommodations are responsible for requesting accommodations and providing qualifying documentation to the DRC. Every effort is made to provide reasonable accommodations for qualified students with disabilities. Qualified students who wish to request an accommodation for a disability should contact their campus DRC at: [http://www.asu.edu/studentaffairs/ed/drc/](http://www.asu.edu/studentaffairs/ed/drc/) If you are a student in need of special arrangements we will do all we can to help, based on the recommendations of these services. For the sake of equity for all students, we cannot make any accommodations without formal guidance from these services.

**Drop and Add Dates/Withdrawals:** Please refer to the [academic calendar](http://www.asu.edu/studentaffairs/ed/drc/) on the deadlines to drop/withdraw from this course. Consult with your advisor and notify your instructor if you are going to drop/withdraw this course. If you are considering a withdrawal, review the following policies: Withdrawal from Classes, Medical/Compassionate Withdrawal.

**Email Communications**
All email communication for this class will be done through your ASU email account and the blackboard site. You should be in the habit of checking your ASU email regularly as you will not only receive important information about your class(es), but other important university updates and information. You are solely responsible for reading and responding if necessary to any information communicated via email. For help with your email go to: [http://help.asu.edu/sims/selfhelp/SelfHelpHome.seam?dept_pk=822](http://help.asu.edu/sims/selfhelp/SelfHelpHome.seam?dept_pk=822) and file a help desk ticket by clicking on “My Help Center.”

**Campus Resources:** As an ASU student you have access to many resources on campus. This includes tutoring, academic success coaching, counseling services, financial aid, disability resources, career and internship help and many opportunities to get involved in student clubs and organizations.
- Tutoring: [https://tutoring.asu.edu/tutoring](https://tutoring.asu.edu/tutoring)
- Counseling Services: [http://students.asu.edu/counseling](http://students.asu.edu/counseling)
- Financial Aid: [http://students.asu.edu/financialaid](http://students.asu.edu/financialaid)
- Major/Career Exploration: [https://cls.asu.edu/majorexploration](https://cls.asu.edu/majorexploration)
- Career Services: [http://students.asu.edu/career](http://students.asu.edu/career)