

ETHICS, SCIENCE, & TECHNOLOGY

PROFESSOR: Dr. Blake Hereth (“Dr. H”)

PRONOUNS: they/them

EMAIL: bhereth@calpoly.edu

OFFICE: Building 47, Room 123

CLASS MEETINGS: Tuesday/Thursday 12:00-2:00pm in Magic Hall 789

E-OFFICE: Zoom (calpoly.zoom.us/j/123)

E-STUDENT HOURS: Tuesday/Thursday 12:00-1:00pm and by appointment

CATALOG DESCRIPTION:

Ethical decision-making as applied to issues such as the use of robots, the treatment of animals, sustainability, scientific fraud, feminist analysis of science and technology, as well as questions about whether technology is just a value-neutral tool or, rather, embodies certain values. Course may be offered in **classroom-based**, online, or hybrid format. 4 lectures. Cross-listed as [HNRS 325/PHIL 323](#). Fulfills GE Upper-Division C (GE Area C4 for students on the 2019-20 or earlier catalogs).

COURSE GOALS:

By the end of the course, students should be able to:

- identify and speak intelligently about major issues in the ethics of technology;
- understand the nature, bounds, and rules of professional ethics;
- demonstrate a strong empirical understanding of existing forms of ethically interesting technologies;
- develop a code of professional ethics for a field of technology;
- write two philosophically rigorous, empirically informed, and original papers on the ethics of technology; *and*
- develop a creative final project highlighting something they have learned in the course.

ASSIGNMENTS:

- **Participation (20%):** Class will be held face-to-face in Magic Hall 789. Watch/read/listen to the required content carefully and come prepared to engage. Remember: There are many ways to engage, including for shy students, like talking to peers, asking questions on the class Slack channel, and so on. Find a way to engage that works best for you.
- **Professional Ethics Statement (15%):** Beginning with an in-class group writing exercise on Week 1, students will write a professional ethics statement (mirrored on the ACM’s Code of Ethics) for one of the following fields, with each group writing for a

different field: computer science/engineering, agricultural science, biomedical engineering, civil engineering, environmental engineering, manufacturing engineering, and software engineering. The statement should be at least 2-3 double-spaced pages and should identify and outline important ethical guidelines relevant to the particular field of work. **A partial draft should be produced in class during Week 1, with a polished draft submitted via Canvas at the end of Week 2.**

- **Short Paper 1 (15%):** Each student should write a 1,500-word paper (exclusive of notes and bibliography) where they make an original, creative argument on a relevant course topic. (See the Canvas rubric for further details.) **Due the end of Week 4.**
- **Short Paper 2 (20%):** Each student should write a 1,500-word paper (exclusive of notes and bibliography) where they make an original, creative argument on a relevant course topic. (See the Canvas rubric for further details.) **Due the end of Week 8.**
- **Final Creative Project (30%):** Either individually or in small groups, every student should produce a final project illustrating something they have learned about ethics, science, and technology from the course. The original product can take any number of forms, including (but not limited to): an academic poster, a work of art, a smartphone app (e.g., for equitable dating), an algorithm designed to alleviate some ethical worry (e.g., to reduce implicit bias), a short documentary, etc. Students must showcase their final creative projects at the Creative Projects Showcase (to be held during the time scheduled for the final exam), where students will explain their work and have it evaluated by me and other students. **Due Final Exam Day (date TBD).**

GRADING SCALE:

- I use a standard grading scale for this course:
 - A = 90-100%
 - B = 80-89.99%
 - C = 70-79.99%
 - D = 60-69.99%
 - F = 59.99 or below

TEXTBOOK(S):

- *The Ethics of Invention: Technology and the Human Future*, Sheila Jasanoff. NY: W.W. Norton & Company, 2016. ISBN: 9780393078992. **Free copy [here!](#)**
- **All other readings will be made available on Canvas.**

SCHEDULE:

(NOTE: THIS SCHEDULE IS TENTATIVE AND MAY CHANGE.)

WEEK 1: COURSE INTRODUCTION + PROFESSIONAL ETHICS

Tuesday Read/Watch:

- Syllabus
- Association for Computing Machinery (ACM), “ACM Code of Ethics and Professional Conduct”

Thursday Read/Watch:

- Michael Davis, “Professional Ethics Without Moral Theory: A Practical Guide for the Perplexed Non-Philosopher”

- **Partial draft of Professional Ethics Statement to be written during class!**

WEEK 2: THE POWER OF TECHNOLOGY

Tuesday Read/Watch:

- Jasanoff, Chapter 1
- Lee Vinsel, [“Costs Untold: Sheila Jasanoff and the Long Trail of Emotional Abuse and Academic Bullying”](#)

Thursday Read/Watch:

- Mrinmoy Majumder & Arun Kumar Tripathi, “Transformative Power of Technologies: Cultural Transfer and Globalization”
- *Love, Death, & Robots* (Season 3, Episode 1), “Three Robots: Exit Strategies”
- **Polished draft of Professional Ethics Statement due!**

WEEK 3: RISK AND RESPONSIBILITY

Tuesday Read/Watch:

- Jasanoff, Chapter 2

Thursday Read/Watch:

- Ted Chiang, “The Lifecycle of Software Objects”
- Robert Sparrow, “Killer Robots”

WEEK 4: THE ETHICAL ANATOMY OF DISASTERS

Tuesday Read/Watch:

- Jasanoff, Chapter 3
- *Black Mirror* (Season 3, Episode 5), “Men Against Fire”

Thursday Read/Watch:

- Paul Hayes & Damian Jackson, “Care Ethics and the Responsible Management of Power and Privacy in Digitally Enhanced Disaster Response”
- Adrian Currie, “Geoengineering Tensions”
- **Short Paper 1 due!**

WEEK 5: REMAKING NATURE

Tuesday Read/Watch:

- Jasanoff, Chapter 4
- Beth Shapiro (TED), [“Ancient DNA: What It Is and What It Could Be”](#)
 - Alternative: Beth Shapiro, *How to Clone a Mammoth*, Chapter 1

Thursday Read/Watch:

- Shlomo Cohen, “The Ethics of De-Extinction”
- Derek D. Turner, “De-Extinction as Artificial Species Selection”

WEEK 6: TINKERING WITH HUMANS

Tuesday Read/Watch:

- Jasanoff, Chapter 5
- Ted Chiang, “Liking What You See: A Documentary”

Thursday Read/Watch:

- Robert Sparrow, “Queerin’ the PGD Clinic”
- *Love, Death, & Robots* (Season 2, Episode 3): “Pop Squad”

WEEK 7: INFORMATION’S WILD FRONTIERS

Tuesday Read/Watch:

- Jasanoff, Chapter 6
- Luciano Floridi, “Information Ethics: On the Philosophical Foundation of Computer Ethics”

Thursday Read/Watch:

- Ying-Tung Lin, Tzu-Wei Hung, & Linus Ta-Hun Huang, “Engineering Equity: How AI Can Help Reduce the Harm of Implicit Bias”

WEEK 8: WHOSE KNOWLEDGE, WHOSE PROPERTY?

Tuesday Read/Watch:

- Jasanoff, Chapter 7
- Sarah Pinsker, “Remember Day”

Thursday Read/Watch:

- *Black Mirror* (Season 4, Episode 1), “USS Callister”
- Kate Devlin, “The Ethics of the Artificial Lover”
- **Short Paper 2 due!**

WEEK 9: RECLAIMING THE FUTURE

Tuesday Read/Watch:

- Jasanoff, Chapter 8
- Tom Parr, “Automation, Unemployment, and Insurance”

Thursday Read/Watch:

- Johannes Himmelreich, “No Wheel but a Dial: Why and How Passengers in Self-Driving Cars Should Decide How Their Car Drives”

WEEK 10: INVENTION FOR THE PEOPLE

Tuesday Read/Watch:

- Jasanoff, Chapter 9
- Ursula K. Le Guin, “The Ones Who Walk Away from Omelas”

Thursday Read/Watch:

- Jane Velkovski (TED Talk), [“The Life-Changing Power of Assistive Technologies”](#)

WEEK 11: FINALS!

- **Final Creative Project due!**
 - **Must be displayed at the Creative Projects Showcase!**

EXPECTATIONS:

- **Email:** Students and instructors can interact directly by emailing bhereth@calpoly.edu. Make sure to put “Ethics, Science, & Technology” in the subject line. Students can expect replies within 24 hours, except on weekends. Emails to university professors need three things: (1) a subject line with the course name/number, (2) address the instructor by their title (e.g., ‘Dr.’ or ‘Prof.’ unless told otherwise), and (3) signed with your name.
- **Student Hours:** At the top of this syllabus, you will see a list of ‘student hours.’ Those are times I set aside just for you. During that time, I will be available to you in my office *and* on Zoom. College is hard (it was *very* hard for me), there’s zero shame in that, and I’m in your corner. Stop by to ask questions, get clarity on an assignment, brainstorm your paper, talk philosophy, tell me about yourself, get some encouragement, or watch endless Instagram reels of dogs. It’s your time.

- Attendance and Participation: Students are expected to attend class regularly, as regular attendance is one of the most important contributors to student success. However, students may occasionally need to miss class due to illness, emergency, or caring for a sick family member. In such cases, you are responsible for notifying me of your absences and working with me to arrange to make up any missed work. I will be very accommodating to students who are experiencing pandemic-related challenges, but you must communicate your requests with me regularly and with as much advance-notice as possible. Likewise, if I should need to miss class, I will communicate with you as soon as possible with clear instructions.
- Academic Honesty: Cal Poly is dedicated to nurturing an inclusive and academically excellent community, which can only flourish with honesty, trust, and mutual respect. At the core of academic excellence is the search for knowledge through the open and dynamic exchange of ideas. You and your student peers must have a strong commitment to personal and professional integrity that informs your behavior both before and after graduation, discouraging you from creating a false appearance of achievement by presenting the work of others as your own, or bending or breaking the rules of any situation. Either action can lead to serious consequences, academic and otherwise. Please thoroughly familiarize yourself with the [Office of Students' Rights and Responsibilities page on Academic Integrity](#), as well as the information found on [Academic Programs and Planning website regarding cheating and plagiarism](#).
- Respect of Self and Others: As a (mostly) consistent Kantian, I expect everyone in this course to maintain a certain level of self-respect. This means taking yourself seriously (although not *too* seriously) and avoiding excessive self-deprecation. You are valuable and an important part of the philosophical community. I also expect everyone in this course to maintain respect for others. Philosophical engagement is often aggressive and it's easy to see why: Sometimes you develop a devastating objection to someone's argument, and you want to deliver it in epic fashion. But we won't indulge those impulses here. It's okay to care about the material and to discuss it passionately, but *don't* interrupt others, *do* be equitable with your speaking time (and be aware that we're often bad judges of when we've exceeded our equitable speaking time), *do* aim to help someone identify any flaws in their view *and* make suggestions for how they might improve it, and *do* respect others' pronouns.
- Pronouns: At Cal Poly everyone has the right to be addressed by the name and personal pronouns that correspond to their gender identity, including non-binary pronouns, for example: they/them/theirs, ze/zir/zirs, etc. As of January 2020, students can update their pronouns in their Canvas user settings. If you have not yet updated your pronouns in Canvas, you can do so at the beginning of the term so that I can make sure to refer to you using the correct pronouns. If your pronoun set is not available in Canvas, please let me know. I recognize that preferred names and pronouns may change during the quarter, if at any point during the quarter you would like to be addressed differently, please let me know. As part of our commitment to inclusion in this course, it is important that all students in this class respect the preferred names and pronouns of their peers. Mistakes in addressing one another may happen. If you make a mistake or are corrected, please briefly apologize and correct yourself. To learn more about personal pronouns and why they are important please visit Cal Poly's [Pronouns Matter](#) website and mypronouns.org.
- Confidentiality & Mandated Reporting: Cal Poly is committed to fostering a safe, productive learning environment for all students. Title IX and CSU policy prohibit

discrimination on the basis of sex, which includes sexual harassment, domestic and dating violence, sexual assault, and stalking. We understand that sexual violence can undermine students' academic success and we encourage students who have experienced some form of sexual misconduct to access appropriate resources so they can get the support they need and deserve. As an instructor, I have a mandatory reporting responsibility as a part of my role. It is my goal that you feel comfortable sharing information related to your life experiences in classroom discussions, in your written work, and in our one-on-one meetings. I will seek to keep the information you share private to the greatest extent possible, but I am required to report information I receive regarding sexual misconduct or information about a crime that may have occurred during your time at Cal Poly.

- Students can *report incidents* of alleged sexual misconduct to either or both of the following resources:
 - **Civil Rights & Compliance Office** (Title IX) | crco@calpoly.edu | 805-756-6770 | crco.calpoly.edu
 - **Cal Poly Police Department** | police@calpoly.edu | 805-756-2281 | afd.calpoly.edu/police
- Students can access *confidential support* from two separate resources on campus:
 - **Safer** | safer@calpoly.edu | 805-756-2282 | safer.calpoly.edu
 - **Counseling Services** | counseling@calpoly.edu | 805-756-2511 | chw.calpoly.edu/counseling
- **Problems with the Course:** If you have concerns or suggestions regarding this course, I encourage you to speak to me directly about them at any time. (I will also give you ample opportunities to provide feedback, which I value.) If you prefer to speak with someone else, you may contact:
 - Dr. Kenneth Brown
 - Chair, Philosophy Department
 - Building 47, Room 37B
 - 805-756-2041
 - dbrown07@calpoly.edu

STUDENT SUPPORT STATEMENTS:

- **Food Pantry:** Some of our students must choose between food and textbooks. For students who live in San Luis Obispo and surrounding areas, the **Cal Poly Food Pantry** is located in the Campus Health & Wellbeing (Building 27, Room 10, Lower Level) and is there for you Monday-Friday, 8:30am-5pm. Kari Howell runs the pantry and can be reached by email at khowel02@calpoly.edu or by phone at 805-756-1045. If you need food over the weekend when the Cal Poly Food Pantry is closed, check out the **SLO Food Bank** or contact me by email (I'm a decent cook!).
- **Pregnant & Parenting Students:** Cal Poly SLO is motivated to make the campus family friendly with **resources, support services, and information about transportation and family friendly events**. For specific questions or to provide feedback on how the university can better accommodate the needs to pregnant and parenting students, please email studentswithdependents@calpoly.edu. I will also personally ensure there's a private lactation area in my classroom for students who need to pump or feed. And your kids are always welcome in class, so don't hesitate to bring them if that's easier for you!

- Tutoring & Writing Resources: If you want tutoring, sign up for services [here](#). If you want help with writing, check out Cal Poly's Writing & Learning Center [here](#).
- Student Mental Health and Well-being: We are a campus that cares about the mental health and well-being of all individuals in our campus community, particularly during this uncertain time. If you or someone you know are experiencing mental health challenges at Cal Poly, please contact [Counseling Services](#). They will be offering free in-person counselling for all students. For mental health emergencies, call 805-756-2511 anytime.
- COVID-19 Classroom Protocols and Campus Safety: Cal Poly is committed to protecting the health and safety of the campus community. Taking preventative steps, as well as monitoring your health and staying home if you are feeling unwell, will help protect the entire Cal Poly community. This class aligns with campus COVID-19 protocols. Your presence in class is your attestation that you are following these protocols. Please note that safety protocols may change throughout the quarter. You are expected to follow all protocols as outlined on the [Campus Health and Wellbeing COVID-19 webpage](#). Thank you for doing your part to ensure the health and wellbeing of our classroom community.
 - Face Coverings: Anyone is welcome to wear a mask in the classroom if they so choose, and members of our classroom community may wear face coverings for any number of reasons. Please do not infer anything about vaccination or health status based on an individual's decision to mask. The people with whom you interact may have compelling but private reasons to remain masked. Please treat others the way you would want to be treated if your roles were reversed, and please remember to always carry a mask with you. For the most updated information on face covering protocols and distribution, please visit Cal Poly's [Roadmap](#) website.
 - COVID-19 Isolation: Please follow the practices outlined in the [Student Isolation and Quarantine Guide](#), which is designed to support students who have received a positive COVID-19 test, who are exhibiting symptoms of COVID-19, or who have been in close contact with someone with COVID-19. As your instructor, I support these practices because they will help maintain a healthy and safe classroom environment. As soon as you know that you will be absent from class and/or unable to complete coursework as a result of a known COVID-19 related issue, please email me right away. If you are unable to contact me due to an extenuating circumstance, please follow the guidance outlined on the [Instructor Notification of Student Absence webpage](#) on the Dean of Students website to ensure someone connects with me about your absence(s).
 - Please be aware, pursuant to [the class attendance policy](#), isolation due to COVID-19 is an excused absence and will allow you to make up missed work, which may include virtual opportunities for major assignments and exams. In the event of this circumstance, you are encouraged to get notes from a classmate to ensure you stay current on class discussions and activities that you may miss. If you aren't personally connected with anyone in the class, please let me know and, following your permission in writing, I will do my best to find someone willing to share their class notes while keeping your status confidential.
 - Please note that faculty are not required to teach a course in more than one modality. That means you likely will not be provided a virtual version of every lesson delivered in person or every course activity assigned. That said, I understand

this remains a challenging time for all of us, and I will do my best to support you should you be asked to isolate in place due to COVID-19. Please stay in touch with me about COVID-19-related absences; I will keep your status confidential.

- **Disability Services:** It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Disability Resource Center, Building 124, Room 119, at 805-756-1395, as early as possible in the term. Apply for disability services or email drc@calpoly.edu. Canvas has two new features that provide students with options for accessing and perceiving content in ways that work best for them: **Ally Alternative Formats and Immersive Reader** are available on every Canvas page. Students can use Alternative Formats to convert text and document files to other formats such as EPUB, HTML, Electronic Braille, BeeLine reader, and even MP3 for listening. Students can use Immersive Reader to hear text on a page read aloud, or customize text size, color, contrast and spacing for easier viewing.
- **Alcohol & Drug Abuse Prevention:** Many students are impacted by alcohol and drug use while in college, and I want to make sure you have the support you need to thrive personally and academically. Wellbeing Services offers a variety of alcohol and drug resources to support students in making safer, healthier decisions. If you have any concerns about your substance use, I encourage you to reach out and utilize the services below:
 - Wondering how much is too much? Take this anonymous, **online assessment** and find out. You'll receive personalized feedback on your alcohol or drug use and tips to stay safer.
 - Want to talk with someone? Meet with a **peer health coach** or professional health educator by emailing kvinther@calpoly.edu.
 - In recovery? **Mustangs for Recovery** holds regular meetings and provides a place to connect with others in the Cal Poly recovery community.