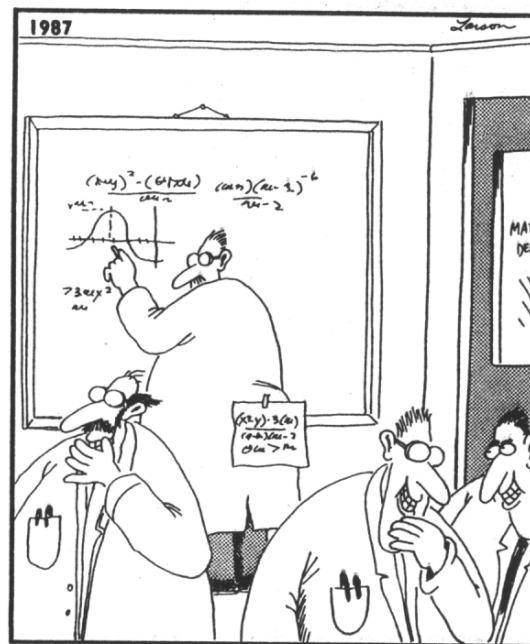


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ANTH 395  
Anthropology of Science  
GFC Hours 3-0  
Winter 2024



from: Larson, Gary. *The Complete Far Side, 1980-1994, 2003*

**Prerequisite(s):** None.

**LAND ACKNOWLEDGEMENT:**

Oki, Aba-wath-tech, Tansi, Dadanast'ada, Hello! My name is Sabrina Perić, and I am a settler, living as an uninvited guest in beautiful Treaty 7. I want to acknowledge that the University of Calgary is located on the traditional territory of the people of Treaty 7. This includes the Niitsitapi (including the Siksika, Piikani and Kainai First Nations), the Tsuut'ina First Nation, and the Iyethka Nakoda (which includes the Goodstoney, Bearspaw and Chiniki First Nations). Calgary is situated on the confluence of the Bow and Elbow rivers, the Niitsitapi name for this place is Mohkinstsis, the Iyethka call it Wicispa Oyade, and the Tsuut'ina call this area Gutsistsi. Calgary is also home to the Metis Nation of Alberta, Districts 5 and 6. It is important for me to trace out these ties – because without them we would not be here. Universities and scholars have benefited greatly from the dispossession of Indigenous people. Territorial acknowledgement is therefore very important for me – it is not only about my accountability as a settler to ongoing processes of colonialism, but as a member of a large immigrant family. I do not want to simply take for granted where I live and where I work. Nor do I want colonial processes to continue with immigrants as key actors – as they have in the past. So I begin by thanking the people on whose territories I continue to live and work as an uninvited guest in the sincere hope that we can go forward together in a good way: Nitsiniyi'taki, Isniyes, Kinanâskomitin, Siyisgaas, and Thank You!

**COURSE DESCRIPTION:**

The debates over gender testing in sports, artificial intelligence, fetal testing, the efficacy of vaccines, and even the veracity of climate change all point to the centrality of science and technology in our lives. Science, as a practice and as a pathway of innovation, is a cultural product that has the ability to completely transform our present lives and to reorganize the future of human existence. Western science (and its hegemonic ideals) in particular, commands enormous influence in our societies. It has shown the potential for good and for ill, and always, for controversy. This course offers an introduction to both the culture and the politics of science, by drawing on the anthropology, history and philosophy of science. In particular, we will examine the rise of 'the scientific method,' the training of scientists, the rise of new technologies and their implications for difference and inequality, and lastly, the production of relationships between scientists and the wider political, racial, and gendered world. This does not mean, however, that we will not discuss, read about and engage with non-hegemonic science. To the contrary, we will examine the colonial nature of western science, and understand not only the existence and autonomy of other scientific traditions, such as Indigenous science, but their critical importance today. Students will develop the critical vocabularies and analytic skills to address contemporary scientific controversy and be active participants in the making of our technoscientific worlds.

**STATEMENT OF INCLUSION:**

The topics in this class can sometimes be difficult topics – we may find ourselves on different sides of the debates surrounding, for example, vaccines, reproductive technologies, climate change, AI and other topics. What makes this class work, and what makes it a place to learn together, is respect and empathy. In this class, all people, with all opinions and beliefs, are welcome. Doing anthropology today means both celebrating our diversity, but also recognizing

that our different pathways are what contribute most to new ideas. Speak openly, show respect, share, be bold and be yourself.

### **ACKNOWLEDGMENT AND RESPECT FOR DIVERSITY**

The Department of Anthropology and Archaeology views diversity of identity as a strength and resource. Your experiences and different perspectives are encouraged and add to a rich learning environment that fosters critical thought through respectful discussion and inclusion.

### **LEARNING OUTCOMES:**

The Department of Anthropology and Archaeology is committed to student knowledge and skill development. This is a 300-level course, designed to provide students with critical skills in discussing, reading and writing. By the end of this course, students should be able to:

- Read academic and popular texts critically and analytically;
- Summarize effectively academic and popular texts on science;
- Locate and critically discuss online sources related to scientific controversy or the relationship between science and society;
- Evaluate and discuss the claims and theories made by scholars;
- Conduct participant observation and analyze observations with insights from class texts and discussions;
- And synthesize and summarize ideas and texts discussed in class and apply them to contemporary scientific worlds in a coherent manner in writing.

### **READINGS AND TEXTBOOKS:**

There is no required textbook. Because textbooks are too expensive. Required readings (see tentative class schedule) can be accessed via links in our D2L Reading List.

### **REQUIRED TECHNOLOGY and EQUIPMENT:**

In order to successfully engage in their learning experiences at the University of Calgary, students are required to have reliable access to the following technology.

- A computer with a supported operating system
- A current and updated web browser
- A word processor, preferably Microsoft Word

### **COURSE FORMAT**

This course will follow an interactive lecture and discussion style format, accompanied by the occasional film or documentary in class. Readings are crucial and students are expected to come to class having both read the readings and prepared to discuss them and ask questions. Discussion will be a very important component of this class. All course materials, assignment guidelines and any other relevant information or announcements will be posted on the class D2L website.

## COURSE REQUIREMENTS AND ASSESSMENT

This course is reading intensive. With this in mind, the course writing will be used as a supplement to aid students in cementing their reading techniques, their textual comprehension and their ability to translate apply idea from class to public debates surrounding science and/or scientific breakthroughs and/or scientific controversies. Close weekly readings, detailed in-class discussions of those class readings and student participation will form the backbone of this course.

Students are expected to maintain a “Science in Media” portfolio on our class discussion site, engage in the online discussion and portfolio , write 2 mini science ethnographies, and submit one final take-home exam (questions provided in advance), due at the end of the semester. Students will be evaluated on the basis of a 100-point system, whereby:

Science in Media portfolio (5 entries)	30%
4 portfolio responses	20% (each is worth 5%)
Mini science ethnography 1 (due : 2/15)	10%
Mini science ethnography 2 (due : 4/4)	10%
Final take-home paper (due: 4/22)	30%

The final mark out of 100, will then be converted to a letter grade as follows:

A+	95 – 100%	B+	80 – 84.9%	C+	67 – 70.9%	D+	55 – 58.9%
A	90 – 94.9%	B	75 – 79.9%	C	63 – 66.9%	D	50 – 54.9%
A-	85 – 89.9%	B-	71 – 74.9%	C-	59 – 62.9%	F	< 50%

### Assignment details:

#### **Science in Media Portfolio & Portfolio Responses: Description and Assessment**

As part of trying to understand how science and technology shapes our daily lives and educational knowledge, each class participant will be required to maintain an electronic portfolio on “Science in Media” through D2L’s online discussion board. These portfolios will serve as a space for personal reflection, an electronic space where we can all share ideas and lastly, a collection of science news through which we can try to understand our class reading. How do our readings influence the way science can shape our everyday thinking? You will need to update your portfolio regularly, and keep up with it all semester – as you can see the portfolio-related assignments (portfolio and responses) are worth 50% of your grade in this class.

- Portfolio Entries: Every week of the semester (starting in week 2), students have an opportunity to upload **one article/video/story from a mainstream media source** about a current scientific breakthrough, controversy or other science news item, to our class

discussion thread. Students must upload this article *by Sunday night at midnight*, and this article may be a topic of discussion in the week that follows. On the discussion thread, you must put a link to your article or video, then write **3-4 sentences** about: 1) why you chose to upload this article; 2) why it is interesting to you; and 3) how it relates to the content of this class. Though you have an opportunity to upload an entry every week, **you only have to upload five entries over the course of the semester**. This is to account for some weeks being busier than others in your schedule, so that you don't have to upload an entry weekly.

- **Portfolio Entries Assessment:** Each portfolio entry is assessed out of **6 points**: you get 2 points just for doing it, 3 points for answering each of the 3 questions listed above, and 1 point for language (correct grammar, spelling, punctuation etc.).
- Good sources to turn to would be the « Science » or « Science and Technology » sites of mainstream media outlets. For example:
  - <https://www.nature.com/news>
  - <https://www.science.org/>
  - <http://www.nytimes.com/section/science>
  - <https://www.cbc.ca/news/science>
  - [https://www.bbc.com/news/science and environment](https://www.bbc.com/news/science_and_environment)
  - <https://www.sciencefocus.com/>
  - <https://www.sciencenews.org>
  - <http://www.wired.com>
  - <http://www.theguardian.com/science>
  - <https://www.statnews.com/>
  - <https://www.bbc.com/future-planet>
- **Portfolio Responses:** The last component of the electronic portfolio is the *response assignment*. In addition to posting 5 entries over the course of the semester, students will be required to *respond to another student's entry* 4 times throughout the semester. If students are particularly interested or inspired by an article someone else has posted, they can respond to the article. They must write at least 3 sentences indicating 1.) why they chose to respond to this article, and 2.) what they think of (agree/disagree with) the original poster's comments.

Creative uses of the portfolio are highly encouraged! This online discussion should be a lively space for your reflections on course topics, and engagement with your classroom peers.

### **Mini Science Ethnography #1:**

For your first science ethnography assignment, you are required to attend a science lecture/talk on the University of Calgary campus, conduct participant observation, and write about your experience. You can attend any lecture on campus *as long as the person giving a talk is a scientist* (i.e., has a degree in science, works in science/engineering etc.).

In addition to describing the content of the talk and your thoughts on the content, think about the whole environment; where was the talk held? How was the room configured? How did the scientist give their talk? Visual aids? Was it easy for you to follow? How many people were in the audience? Were they able to follow the talk? Was the room dark/light? How was the environment? Was there a q&a? What kinds of questions did people ask? Did people interact/discuss after the talk? What were your impressions of the lecture? Of the audience? **You must, at least briefly, relate it to some discussion/text from class.**

The mini ethnography should be the length of a **good, detailed paragraph – no more than 1 page long, double spaced, 12 pt Times New Roman font.**

For the mini ethnography, you will be assessed in the following way:

- 25% will be awarded for language (grammar, spelling, punctuation);
- 25% will be awarded for structure and clarity (is there a clear beginning and conclusion? Does the student use ethnographic evidence to make a claim? Is the mini ethnography clear and easy to follow? Is it the correct length?);
- 25% will be awarded for relating the ethnography to class material (does the mini ethnography insightfully draw from class readings and/or discussions?)
- 25% will be awarded for the originality of the mini ethnography (is the ethnography asking interesting questions? is it an interesting ethnography?)

### **Mini Science Ethnography #2:**

For your second science ethnography assignment, you will interview the Chat GPT AI Bot. **The goal of this ethnography is to ask and answer the question: what is it like for me to interact with artificial intelligence?** This will be a semi-structured interview, where you will prepare a list of 10-12 questions to ask the AI bot. You are allowed to follow up/ask tangential questions, follow up on an interesting point etc. You may ask the AI bot any questions you like. The goal however is to understand how you feel interacting with the AI. What is the conversation like? Can you tell you are communicating with an AI? How? What are their answers like? Did the AI bot understand your questions? Were you overwhelmed/underwhelmed by the AI bot? Is it possible to have a dialogue? Do you find the interaction enjoyable? What are your thoughts on the experience? Would you do it again?

**You must, at least briefly, relate your ethnography to some discussion/text from class.**

The mini ethnography should be the length of a **good, detailed paragraph – no more than 1 page long, double spaced, 12 pt Times New Roman font.**

For the mini ethnography, you will be assessed in the following way:

- 25% will be awarded for language (grammar, spelling, punctuation);

- 25% will be awarded for structure and clarity (is there a clear beginning and conclusion? Does the student use ethnographic evidence to make a claim? Is the mini ethnography clear and easy to follow? Is it the correct length?);
- 25% will be awarded for relating the ethnography to class material (does the mini ethnography insightfully draw from class readings and/or discussions?)
- 25% will be awarded for the originality of the mini ethnography (is the ethnography asking interesting questions? is it an interesting ethnography?)

### **Final take-home exam:**

- At the end of the semester, students will be provided with a set of three questions. Students must pick one questions and answer it in the form of a 5-6 page paper (12pt font double-spaced), which will be handed in during exam period. The questions will be broad, and will be meant to bring together students' understandings of the class readings, class lecture and discussion content, as well as the materials and discussions from the "Science in Media" portfolios. Further details will be handed out in class.
- Students will upload the finals to the Class's D2L Dropbox.

### **IMPORTANT NOTES:**

#### Late assignment policy:

- 1) Late assignments will be penalized 20% per day, including weekends, without prior instructor approval. This means that, if you hand the assignment in 1 day late, you will lose 20% on the assignment. If you had the assignment in 2 days late, you will lose 40% on the assignment, and so on.

#### Exams and Deferrals:

- 2) Exams may only be deferred in the case of serious illness or medical emergency, religious observance, or domestic affliction (see: <https://www.ucalgary.ca/registrar/exams/deferred-final-exams>)
- 3) Students who miss an exam have up to **48 hours** to contact the instructor to ask for a makeup exam. Students who do not schedule a makeup exam with the instructor within this 48-hour period forfeit the right to a makeup exam, and will receive a mark of zero on the exam or assignment.
- 4) Makeup exams will differ significantly in context: the final exam will consist of different questions.
- 5) Should a request to defer term work exceed the end of the term, a Deferral of Term Work form must be completed and submitted to the Office of the Registrar. The deferral will be recorded on the student record. Deferrals are granted at the discretion of the Dean or designate and are normally granted for 30 days beyond the last day of the term. Should circumstances warrant, the maximum time that may be granted for a deferral of term work is one additional term. Approved extensions must be sent to the Office of the

Registrar. Application information is available at:  
<https://www.ucalgary.ca/registrar/student-centre/student-forms>

- 6) Students may be asked to provide supporting documentation for an exemption/special request. This may include, but is not limited to, a prolonged absence from a course where participation is required, a missed course assessment, a deferred examination, or an appeal. Students are encouraged to submit documentation that will support their situation. Supporting documentation may be dependent on the reason noted in their personal statement/explanation provided to explain their situation. This could be medical certificate/documentation, references, police reports, invitation letter, or a statutory declaration, etc. The decision to provide supporting documentation that best suits the situation is at the discretion of the student. Students cannot be required to provide specific supporting documentation, such as a medical note. Falsification of any supporting documentation will be taken very seriously and may result in disciplinary action through the Academic Discipline regulations or the Student Non-Academic Misconduct policy.

Other:

- 7) Please note that no extra credit or 'make up' work is available in this class.
- 8) You do not need to pass each course component to earn a passing grade in the class.
- 9) For information on the Reappraisal of Graded Term Work, please see:  
<http://www.ucalgary.ca/pubs/calendar/current/i-2.html>
- 10) For information on the Reappraisal of Final Grade. Please see:  
<http://www.ucalgary.ca/pubs/calendar/current/i-3.html>

## **COURSE POLICIES**

### Statement of Expectation for AI Use: Community of Learners Agreement:

In the first week of class, we will, as a community, co-create an agreement identifying expectations on the use of AI tools that ensures everyone: 1) understands the benefits and limitations of the tools, 2) is able to differentiate between appropriate and inappropriate uses, 3) has equal access to such tools, and 4) is clear on the University of Calgary's relevant policies and procedures.

As necessary, we will agree to revisit and reconsider aspects of the agreement throughout the course to ensure all members of the course's Community of Learners continue to have the required shared understanding of the expectations for AI tool use in this class.

*Important:* Depending on the class's decisions about the use of AI: any and all use of AI and AI tools in *assessment* tasks must be transparently and honestly identified and referenced as directed. Follow-up reflection assignments explaining AI use must be completed and uploaded to eClass assignments within one (1) day of major assessment task completion.



**Other important course policies:**

- The most important thing is to be respectful and supportive of other students.
- Please turn off your cell phone and any other electronic devices/background noises on your computer.
- Unless you have an approved accommodation, you are not allowed to record the lecture on your personal devices.
- You are responsible for taking your own notes, or for obtaining notes from a classmate if you have to miss a class for unavoidable reasons.

## UNIVERSITY POLICIES

**ACADEMIC ACCOMMODATIONS**

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services; SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit <https://live-ucalgary.ucalgary.ca/student-services/access>. Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Instructor or the Department Head. The full policy on Student Accommodations is available at <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf>

**ACADEMIC INTEGRITY POLICY**

Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. The University Calendar includes a statement on the principles of conduct expected of all members of the university community (including students, faculty, administrators, any category of staff, practicum supervisors, and volunteers), whether on or off university property. This statement applies in all situations where members of the university community are acting in their university capacities. All members of the university community have a responsibility to familiarize themselves with the principles of conduct statement, which is available at: [www.ucalgary.ca/pubs/calendar/current/k.html](http://www.ucalgary.ca/pubs/calendar/current/k.html).

**ACADEMIC MISCONDUCT**

The University of Calgary is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect.

Academic dishonesty is not an acceptable activity at the University of Calgary, and students are **strongly advised** to read the Student Misconduct section in the University Calendar at: [www.ucalgary.ca/pubs/calendar/current/k-3.html](http://www.ucalgary.ca/pubs/calendar/current/k-3.html). Often, students are unaware of what constitutes academic dishonesty or plagiarism. The most common are (1) presenting another student's work as your own, (2) presenting an author's work or ideas as your own without adequate citation, and (3) using work completed for another course. Such activities will not be

tolerated in this course, and students suspected of academic misconduct will be dealt with according to the procedures outlined in the calendar at: <https://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-procedure>

For students wishing to know more about what constitutes plagiarism and how to properly cite the work of others, the Department of Geography recommends that they attend Academic Integrity workshops offered through the Student Success Centre: <https://www.ucalgary.ca/student-services/student-success/learning/academic-integrity>

### **INSTRUCTOR INTELLECTUAL PROPERTY**

Course materials created by professor(s) (including course outlines, presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the professor(s). These materials may NOT be reproduced, redistributed or copied without the explicit consent of the professor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing. Information on Instructor Intellectual Property can be found at <https://www.ucalgary.ca/legal-services/university-policies-procedures/intellectual-property-policy>

### **FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY ACT**

Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary.

### **COPYRIGHT LEGISLATION**

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (<https://ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy>) and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorized sharing of course materials (including instructor notes, electronic versions of textbooks, etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

### **SUPPORTS FOR STUDENT LEARNING, SUCCESS, AND SAFETY**

Please visit the Registrar's website at: <https://www.ucalgary.ca/registrar/registration/course-outlines> for additional important information on the following:

- Wellness and Mental Health Resources
- Student Success Centre
- Student Ombuds Office
- Student Union (SU) Information
- Graduate Students' Association (GSA) Information
- Emergency Evacuation/Assembly Points

- Safewalk

## TENTATIVE CLASS SCHEDULE

Date	Topics/ Readings/Due Dates
T Jan 9	<p><b><u>Week 1: Science and Culture I: Science, Truth and AI</u></b>  <u>Class topic:</u> Intro to the class; the Science and “Truth” Crisis  <u>Optional readings:</u>            1) Jones, Nicola. "How to stop AI deepfakes from sinking society-and science." <i>Nature</i> 621, no. 7980 (2023): 676-679.  <a href="https://www.nature.com/articles/d41586-023-02990-y">https://www.nature.com/articles/d41586-023-02990-y</a></p>
R Jan 11	<p><b><u>Week 1: Science and Culture I: Science, Truth and AI</u></b>  <u>Class topic:</u> AI, science and us  <u>In-class activities:</u>            1) Community of Learners Agreement Surrounding AI  <u>Required reading: (please read before class):</u>            1) Van Noorden, Richard, and Jeffrey M. Perkel. "AI and science: What 1,600 researchers think." <i>Nature</i> 621, no. 7980 (2023): 672-675.  <a href="https://www.nature.com/articles/d41586-023-02980-0">https://www.nature.com/articles/d41586-023-02980-0</a>            2) Editorials, N. "Tools such as ChatGPT threaten transparent science; here are our ground rules for their use." <i>Nature</i> 613, no. 612 (2023).  <a href="https://www.nature.com/articles/d41586-023-00191-1">https://www.nature.com/articles/d41586-023-00191-1</a>            3) Take a look at: <a href="https://aieducation.trubox.ca/">https://aieducation.trubox.ca/</a></p>
T Jan 16	<p><b><u>Week 2: Science and Culture II: Expertise, Risk and Health</u></b>  <u>Class topic:</u> The Vaccine Debates: Autism  <u>Required reading: (please read before class):</u>            1) Kaufman, Sharon R. "Regarding the rise in autism: vaccine safety doubt, conditions of inquiry, and the shape of freedom." <i>Ethos</i> 38, no. 1 (2010): 8-32.            UCalgary Library Link.</p>
R Jan 18	<p><b><u>Week 2: Science and Culture II: Expertise, Risk and Health</u></b>  <u>Class topic:</u> The Vaccine Debates: Covid-19  <u>In-class activities:</u>            1) Class visitor  <u>Required reading: (please read before class):</u>            1) Berlivet, Luc, and Ilana Löwy. "Hydroxychloroquine controversies: clinical trials, epistemology, and the democratization of science." <i>Medical anthropology quarterly</i> 34, no. 4 (2020): 525-541. UCalgary Library Link.</p>
T Jan 23	<p><b><u>Week 3: Science and Culture III: Science, Sex and Gender</u></b>  <u>Class topic:</u> Binaries, Stereotypes and Science  <u>Required reading: (please read before class):</u></p>

	<p>1) Martin, Emily. "The egg and the sperm: How science has constructed a romance based on stereotypical male-female roles." <i>Signs</i> (1991): 485-501.  <a href="https://web.stanford.edu/~eckert/PDF/Martin1991.pdf">https://web.stanford.edu/~eckert/PDF/Martin1991.pdf</a></p>
R Jan 25	<p><b><u>Week 3: Science and Culture III: Science, Sex and Gender</u></b>  <u>Class topic:</u> Defining sex  <u>Required reading: (please read before class):</u>  1) Pape, Madeleine. "Expertise and non-binary bodies: Sex, gender and the case of Dutee Chand." <i>Body &amp; Society</i> 25, no. 4 (2019): 3-28. UCalgary Library Link.</p>
T Jan 30	<p><b><u>Week 4: Anthropology and Science</u></b>  <u>Class topic:</u> Anthropology and Knowledge  <u>Required reading/watching: (please read/watch before class):</u>  1) Evans-Pritchard, Edward Evan. <i>Witchcraft, oracles and magic among the Azande</i>. Oxford: Clarendon Press, 1976. Please read excerpt only, from pp 63-83. Available at: <a href="http://faculty.washington.edu/stevehar/Witchcraft.pdf">http://faculty.washington.edu/stevehar/Witchcraft.pdf</a></p>
R Feb 1	<p><b><u>Week 4: Anthropology and Science</u></b>  <u>Class topic:</u> Laboratory Life  <u>In-class activities:</u>  1) Class Visitor  <u>Required reading: (please read before class):</u>  1) Latour, Bruno. "Give me a laboratory and I will raise the world." <i>The science studies reader</i> (1999): 258-275. UCalgary Library Link</p>
T Feb 6	<p><b><u>Week 5: Cultures of Science</u></b>  <u>Class topic:</u> Studying Physicists  <u>In-class video:</u>  1) CERN and the Rise of the Standard Model  <a href="https://www.youtube.com/watch?v=cfwBelQubYI">https://www.youtube.com/watch?v=cfwBelQubYI</a>  <u>Required reading: (please read before class):</u>  1) Traweek, Sharon. <i>Beamtimes and lifetimes: The world of high energy physicists</i>. Harvard University Press, 2009. Please read the <i>Prologue: An Anthropologist Studies Physicists</i> (pp 1-17) and <i>Chapter 3: Pilgrim's Progress: Male Tales Told During a Life in Physics</i>, pp. 74-105. UCalgary Library Link.</p>
R Feb 8	<p><b><u>Week 5: Cultures of Science</u></b>  <u>Class topic:</u> Indigenous Science and Hegemonic Practices in Science  <u>In-class activities:</u>  1) Class visitor  <u>Required reading (please read before class):</u>  1) Atalay, Sonya. "Indigenous science for a world in crisis." <i>Public Archaeology</i> 19, no. 1-4 (2020): 37-52.</p>
T Feb 13	<p><b><u>Week 6: Normal Science</u></b>  <u>Required reading (please read before class):</u>  1) Kuhn, Thomas S. <i>The Structure of Scientific Revolutions</i>. University of Chicago press, 2012. Please read <i>Chapter 1: Introduction – A Role for History</i> (pp 34-40),</p>

	<i>Chapter 2: The Route to Normal Science</i> (pp 41-49) and <i>Chapter 3: The Nature of Normal Science</i> (pp 50 – 58)
R Feb 15	<p><b><u>Week 6: Normal/Abnormal Science</u></b>  <b><u>DUE: Mini Science Ethnography 1</u></b>  <u>In-class activities:</u>  1) van der Haak, Bregtje, Director. <i>DNA Dreams: Bio-Science in China</i>, Film. 2013. <a href="https://www.youtube.com/watch?v=1dVv5RMwzuo">https://www.youtube.com/watch?v=1dVv5RMwzuo</a>  <u>Required reading (please read before class):</u>  Kuhn, Thomas S. <i>The Structure of Scientific Revolutions</i>. University of Chicago press, 2012. Please read <i>Chapter 4: Normal Science as Puzzle Solving</i> (pp 59-64), <i>Chapter 6: Anomaly and the Emergence of Scientific Discoveries</i>, (pp 72 – 81).</p>
Feb 18-24	Reading Break. No classes.
T Feb 27	<p><b><u>Week 7: Normal Science II</u></b>  <u>Class topic:</u> Science and Falsifiability  <u>Required reading (please read before class):</u>  1) Popper, Karl R. “Normal science and its dangers” in Lakatos, Imre, and Alan Musgrave. "Criticism and the Growth of Knowledge." (1970). Find article at: <a href="http://earthweb.ess.washington.edu/roe/Knowability_590/Week1/Normal%20Science%20and%20its%20Dangers.pdf">http://earthweb.ess.washington.edu/roe/Knowability_590/Week1/Normal%20Science%20and%20its%20Dangers.pdf</a></p>
R Feb 29	<p><b><u>Week 7: What is Objectivity?</u></b>  <u>Class topic:</u> The Image of Objectivity  <u>Required reading (please read before class):</u>  1) Daston, Lorraine and Galison, Peter. 1992. “The Image of Objectivity.” In <i>Representations</i> 40: 81- 128.</p>
T Mar 5	<p><b><u>Week 8: Meeting and Picking Sweetgrass</u></b>  <u>Class topic:</u> Multiple Knowledges  <u>Required reading (please read before class):</u>  1) Kimmerer, Robin Wall, and Monique Gray Smith. <i>Braiding Sweetgrass for Young Adults: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants</i>. Minneapolis: Zest Books, 2022. Please read all of “Meeting Sweetgrass” (pp 8 - 63). UCalgary Library Link.</p>
R Mar 7	<p><b><u>Week 8: Meeting and Picking Sweetgrass</u></b>  <u>Class topic:</u> Multiple Knowledges  <u>Required reading (please read before class):</u>  1) Kimmerer, Robin Wall, and Monique Gray Smith. <i>Braiding Sweetgrass for Young Adults: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants</i>. Minneapolis: Zest Books, 2022. Please read “Picking Sweetgrass”, specifically “Epiphany in the Beans,” “The Three Sisters,” “Wisgaak Gokpenagen: A Black Ash Basket” and “The Honorable Harvest” (pp 100 – 131, pp 153 - 175). UCalgary Library Link.</p>
T Mar 12	<p><b><u>Week 9: Braiding Knowledges</u></b>  <u>Required reading (please read before class):</u></p>

	<p>1) Kimmerer, Robin Wall, and Monique Gray Smith. <i>Braiding Sweetgrass for Young Adults: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants</i>. Minneapolis: Zest Books, 2022. Please read “Braiding Sweetgrass”, specifically “In the footsteps of Nanabozho: becoming Indigenous to place,” “Putting down roots,” and “Old-Growth Children” (pp 176 – 190, pp 221 – 247).</p>
R Mar 14	<p><b><u>Week 9: AI and the Social I</u></b>  <u>Class topic:</u> An Anthropology of Technology  <u>Required reading: (please read before class):</u>  1) Pfaffenberger, Bryan. "Social anthropology of technology." <i>Annual review of Anthropology</i> 21, no. 1 (1992): 491-516. UCalgary Library Link.</p>
T Mar 19	<p><b><u>Week 10: AI and the Social II</u></b>  <u>Class topic:</u> Early Writing on AI  <u>Required reading (please read before class):</u>  1) Forsythe, Diana E. "Engineering knowledge: The construction of knowledge in artificial intelligence." <i>Social studies of science</i> 23, no. 3 (1993): 445-477.</p>
R Mar 21	<p><b><u>Week 10: AI and the Social III</u></b>  <u>Class topic:</u> Approaches to AI  <u>Required reading (please read before class):</u>  1) Lewis, Jason Edward, Noelani Arista, Archer Pechawis, and Suzanne Kite. "Making kin with the machines." <i>Journal of Design and Science</i> 3, no. 5 (2018): 1-18.  2) Joyce, Kelly, Laurel Smith-Doerr, Sharla Alegria, Susan Bell, Taylor Cruz, Steve G. Hoffman, Safiya Umoja Noble, and Benjamin Shestakofsky. "Toward a sociology of artificial intelligence: A call for research on inequalities and structural change." <i>Socius</i> 7 (2021).</p>
T Mar 26	<p><b><u>Week 11: Living in the Uncanny Valley</u></b>  <u>Class topic:</u> Machine Behaviour  <u>In-class activities:</u>  1) Moral Machine Activity <a href="https://www.moralmachine.net/">https://www.moralmachine.net/</a>  <u>Required reading: (please read before class):</u>  1) Turkle, Sherry. "Computational technologies and images of the self." <i>Social Research</i> (1997): 1093-1111.  2) Pavlus, John. “The Anthropologist of Artificial Intelligence.” <i>Quanta Magazine</i>. Aug. 26, 2019. <a href="https://www.quantamagazine.org/the-anthropologist-of-artificial-intelligence-20190826/">https://www.quantamagazine.org/the-anthropologist-of-artificial-intelligence-20190826/</a></p>
R Mar 28	<p><b><u>Week 11: Living in the Uncanny Valley</u></b>  <u>Class topic:</u> Opacity  <u>Required reading (please read before class):</u>  1) Tufekci, Zeynep. <a href="https://www.niemanlab.org/2014/12/the-year-we-get-creeped-out-by-algorithms/">https://www.niemanlab.org/2014/12/the-year-we-get-creeped-out-by-algorithms/</a>  2) Burrell, Jenna. "How the machine ‘thinks’: Understanding opacity in machine learning algorithms." <i>Big data &amp; society</i> 3, no. 1 (2016).</p>
T Apr 2	<p><b><u>Week 12: Imagining AI</u></b>  <u>Class Topic:</u> Indigenizing AI</p>

	<p><u>Required reading (please read before class):</u></p> <p>1) Lewis, Jason Edward, ed. 2020. Indigenous Protocol and Artificial Intelligence Position Paper. Honolulu, Hawai'i: The Initiative for Indigenous Futures and the Canadian Institute for Advanced Research (CIFAR). Excerpts.  <a href="https://spectrum.library.concordia.ca/id/eprint/986506/7/Indigenous_Protocol_and_AI_2020.pdf">https://spectrum.library.concordia.ca/id/eprint/986506/7/Indigenous_Protocol_and_AI_2020.pdf</a></p>
R Apr 4	<p><b><u>Week 12: Imagining AI</u></b></p> <p><b>DUE: Mini Science Ethnography 2</b></p> <p><u>Class Topic:</u> The New Jim Code</p> <p><u>Required reading (please read before class):</u></p> <p>1) Benjamin, Ruha. <i>Race after Technology: Abolitionist Tools for the New Jim Code</i>. Cambridge: Polity Press, 2019. Please read: “Engineered Inequity” (pp 33 – 48), “Default Discrimination” (pp 53 – 63)</p>
T Apr 9	<p><b><u>Week 13: Imagining AI</u></b></p> <p><u>Class Topic:</u> Abolitionist Tools for AI, and other forms of Collective Action</p> <p><u>In-class activities:</u></p> <p>1) Discussion of take-home final paper topics</p> <p><u>Required reading (please read before class):</u></p> <p>1) Benjamin, Ruha. <i>Race after Technology: Abolitionist Tools for the New Jim Code</i>. Cambridge: Polity Press, 2019. Please read: “Retooling Solidarity, Reimagining Justice” (pp 109 – 129).  2) Wang, Sophie and Taylor Cruz. <i>AI for whose good?</i> Zine. Please find here: <a href="https://www.taylormcruz.com/s/AI-For-Whose-Good-Digital.pdf">https://www.taylormcruz.com/s/AI-For-Whose-Good-Digital.pdf</a></p>
Apr 12-23	<p>Fall Final Exam Period</p> <p><b>Final Take-Home Paper is DUE Monday, April 22<sup>nd</sup>, by 4pm.</b></p>

### IMPORTANT DATES

M Jan 8	Start of Classes
R Jan 18	Last day to drop a class without a financial penalty
F Jan 19	Last day to add or swap a course
F Jan 26	Fee payment deadline for Fall Term full and half courses.
M Feb 19	Alberta Family Day No Classes.
Feb 18-24	Reading Break. No classes.
F Mar 29	Good Friday no classes
M Apr 1	Easter Monday no classes
T Apr 9	End of classes Last day to withdraw from half courses.
Apr 12-23	Fall Final Exam Period.
May 20-25	Exam period for Registrar deferred final exams

<https://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html#fall2017>