

Histories of Racism and Colonialism and the Environmental Sciences, *And how to undo them*

Fall 2022
Environmental Studies 404
History of Science 350
Tuesdays and Thursdays, 9:30-10:45
3 Credit Hours
Classroom: 110 Science Hall

Prof. Elizabeth Hennessy, PhD
University of Wisconsin–Madison
Office Hours: Tuesdays, 10:50-12:05
and by appointment
[Book slots here](#)
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Description

This seminar will explore histories of ideas about race, racism, white supremacy, and settler colonialism as they relate to environmentalism and environmental science in the past and today. Topics covered will include the colonial history of natural history and the earth sciences, environmental determinism, scientific racism, and the relationship between the eugenics movement and national parks conservation. We will take a historical approach to understanding how racism and extractivism became institutionalized in the environmental sciences and how they manifest today. We will also study recent work that aims to address racial and ethnic inequalities in the sciences by scientists of color as well as campaigns to promote change, such as #BlackBotanists, #BlackBirders, #LatinxinSTEM, #NativeSTEM and #IndigenousScience.

The course will be reading- and discussion-heavy and will deal with challenging issues. There are no prerequisites, but an open mind and interest or experience in the sciences and environmentalism are recommended.

Learning Objectives

By the end of class, participants will be able to:

- Define scientific racism, white supremacy, and extractivism and explain how these historical processes shaped the development of Western environmental sciences
- Analyze primary sources for what they can tell us about the socio-economic and cultural context of science
- Identify and critique Euro-centric, diffusionist narratives about the origins of scientific knowledge
- Write analyses of readings and current events, using historical evidence to support arguments
- Apply core concepts to evaluate case studies in the history of the environmental sciences and environmentalism
- Design guides for conducting anti-colonial and anti-racist science

ASSESSMENT PLAN

Un-Grading

I am not going to use a traditional framework for assigning grades in this class, for many reasons. First is that you're all coming to this class with different personal and educational histories, majors, familiarity with the content and necessary skillsets, and pandemic-life struggles. It's very difficult, if not impossible, to have one set of criteria that would be fair to everyone in these circumstances. Second, I am interested in what you are learning and what you think about the topics we'll study together. So that is what I want evidence of – not how much time you had to study for a quiz the night before. Also, there are about 25 of you and one of me, and I am not excited to spend time haggling over points on assignments. I would much rather give you substantive feedback about the quality and clarity of your ideas and writing. (If you want to read more about why many teachers are moving away from traditional grading, check out "[The Case Against Grades](#)" by Alife Kohn.) So here's what we'll do, in two parts:

Part 1: An Un-Grading Portfolio

At the end of the semester, you'll pull together a portfolio of your work over the semester. This will be your final. That portfolio should include:

1. A cover page
2. A table of contents
3. A cover letter
4. 4 1-sentence essays*
5. 3 primary source analyses*
6. 3 response essays*
7. 1 primary source essay*
8. 1 collaboratively authored Manifesto for Better Science*
9. 1 self-assessment of your contributions to the Manifesto for Better Science
10. Descriptions of 3 community engagement actions
11. A record of your class attendance

To get full credit for the assignments with asterisks, they will need to meet the threshold for excellent work. For each major assignment (the ones with *s) we will discuss a rubric that establishes what counts as excellence. Sometimes I will be the one making that assessment, and sometimes it will be your peers. Your work will either meet the threshold or not. You may have as many attempts at meeting the threshold as you need before the portfolio due-date at the end of the semester. We will have structured opportunities for peer- and professor-review of your work (and you can always come to office hours and/or set up collaborative work groups with fellow students for additional advice).

Turning in a complete portfolio of threshold-meeting work will get you a B. I believe a B grade reflects understanding of most course material and engagement in most class activities, but that you might have missed a few assignments because of constraints on your time, etc. **If you want a**

higher grade, great. Then do some extra work, according to the examples below, OR make your case for something else (in which case I suggest you consult with me beforehand and we'll add it to your contract, see below):

For an AB (above average, strong work indicates a high level of understanding of course material and active participation):

B-portfolio *plus all of the below*:

- 1 1-sentence essay
- 1 primary source analysis
- 1 community engagement actions
- No more than 2 missed classes (without prior discussion)

For an A (outstanding, excellent work that shows mastery of the course material and goes above and beyond requirements):

B-portfolio *plus*

- An additional response essay

and two of the below:

- 1 1-sentence essay
- 1 primary source analysis
- 1 community engagement actions
- No more than 2 missed classes (without prior discussion)

For a BC grade (shows understanding of some of the course material and has completed some of the readings and assignments).

- Some (1 or 2 items) of the B-level work is missing or does not meet the standard of quality
- More than 3 missed classes (without prior discussion)

For a C grade,

- Some (3-4 items) of the of the B-level work is missing or does not meet the standard of quality
- more than 4-5 missed classes (without prior discussion)

For a D grade,

- Some (5-6 items) of the of the B-level work is missing or does not meet the standard of quality
- more than 6 missed classes (without prior discussion)

If you're taking this class for honors, your portfolio will need to include additional original work. Make an appointment to meet with me (in office hours) no later than Week 5 (ie, by Oct 7) to discuss your plan and we'll add it to your grading contract.

If you're taking the course for graduate credit, you and I will work together to design the requirements for your portfolio. Meet with me by the end of Week 3 to discuss. You'll need to do additional reading and exceed the equivalent amount of work for an 'A' undergraduate

portfolio. I would recommend completing the undergraduate assignments (with the exception of the primary source essay) and writing response essays about the additional readings you do. Instead of the primary source essay, you should complete a longer piece of writing appropriate to where you are in your program. Possible examples would be an annotated bibliography, a historiographical essay, a literature review, or a research proposal.

More about each of these items, ie, our Assessment Plan:

1-Sentence Essays

Warning: these sound easier than they are! I will offer 5 prompts during the semester for these very-short, 50-words-MAXIMUM, 1-sentence essays. Do 3 for a 'B'. They might ask you to summarize the argument of a reading; compare the arguments of two readings; interpret a primary source; or reflect on some 'Breaking News.' How insightful and precise can your analysis be, concisely?

Primary Source Analyses

For those of you who aren't History majors, primary sources are the kinds of data or evidence that historians trade in. They are "documents" from the period in time that you're studying, produced by historical actors. I put documents in scare quotes because while historians often look at written documents (correspondence, essays, publications, journals, government or institutional records, maps, etc etc), we use that term to mean really *anything* produced at the time in question, even if it doesn't exist on a piece of paper (like art, a piece of cloth, an object) – anything you could analyze to shed light on the people, places, and things of the past. We'll look at several different primary sources, thinking critically about who produced them, their perspective, what language or techniques they might have used that would betray their biases. For these analyses, I'll give you a worksheet to complete. I'll assign 5; do 3 for a 'B.'

Response Essays

These are longer-form writing of at least 500 words for which I will also offer prompts, asking you to compare arguments; apply core concepts to case studies; or write to explain key ideas to public audiences. I'll assign 4; do 3 for a 'B.'

Primary Source Essay

For this assignment, you'll choose one or two primary sources from a curated selection pulled for you in Memorial Library's Special Collections (or, find your own that fit the prompt!). The assignment will be to write an essay of 1000 words analyzing the sources using appropriate readings and concepts from class.

Manifesto for Better Science

At the end of the semester, this collaborative project will ask you—in teams—to draw on readings on anti-colonial and anti-racist science to craft and present a guide for doing science in ways that recognize, and seek to change, histories of white supremacy and colonialism in the sciences.

Possible community engagement actions:

- Serving as class notetaker one day
- Providing peer review on a classmate's work
- Organizing and/or participating in an out-of-class reading group
- Coming to Prof Hennessy's office hours
- Sharing to the whole class a news item
- Making special effort in class discussions and/or small group work
- Something else you do that facilitates connections and learning among our class (make your case!)

A note about engagement actions: I'm not going to keep track of your "participation." For the portfolio, for each action, you should describe in about 200 words what your action was specifically (ie, what did you do?) and (crucially) what you and/or your classmates got out of it (ie, why did it matter?). I recommend keeping track of these as the semester goes by writing about them in your course reflection journal.

Course Reflection Journals

Please buy some kind of small notebook (spiral-bound, single subject or whatever you like) and a pen and bring them to class every day. These aren't for note-taking, but rather to use as a personal reflection journal. I won't collect these or ask to look at them. They're just for you to process what we're learning in class. You'll notice they are not part of the portfolio, although their contents will help you to craft a strong portfolio. There is a good deal of research that attests to the value of writing long-hand for processing new ideas, as well as journaling as an anxiety-reducing strategy. (The idea being that if you get your worries out on the page, then they can stop taking up so much space in your head. I find that sometimes it works, sometimes not, but generally makes me feel better.) If you're worried about losing your notebook or someone reading your private thoughts, then maybe don't put your name on it – you could draw something on it or put a sticker you'd recognize as your own as an anonymous ID. If you hate the idea of journaling, please consider this an experiment. If you still hate it at the end of the semester, you don't have to do it again. And if you have trouble writing long-hand, then please set up a folder of voice memos for yourself, or whatever works for you.

Part 2: Ungrading Contract

The structure of the portfolio means that you decide what grade you want to receive in this class. There are no curves, target grade distributions, or extra credit and you will not be measured against each other. At the beginning of the semester each of you will sign a contract with me that specifies the grade you want to receive and the work you plan to do to earn that grade. We'll both sign it and keep a copy, and we'll each have the right to modify the contract during the semester, chiefly because life happens and your ability to complete the work might not go as you think it will. At the end of the semester, in your portfolio cover letter, you will give yourself a grade and justify it. If I agree with your assessment, that will be your semester grade. I

do, however, reserve the right to change course grades if I don't feel the work is up to quality, including in the case of plagiarized work.

As your professor, I am responsible to you to provide a supportive environment for learning. If I see that you are falling behind or seem uncomfortable in class, I will do my best to reach out. And if I can do something to enhance your ability to succeed in this class, please let me know and I'll do my best.

Deadlines

Unless otherwise specified, all assignments are due the Thursday after the week they were assigned by midnight, uploaded to the appropriate box in Canvas. Turning in work by the deadline – unless you are sick or otherwise unable to work – is in your best interest. You'll get more timely feedback from me and/or your peers. Late work might miss opportunities for peer review. If you know you won't be able to make a deadline, PLEASE TELL ME in advance. I won't penalize you for late work, but if work is not turned in on time, then I might not be able to get to it for comment/grading immediately. The worst-case scenario, I would consider it part of the next batch of revisions (see below).

Revisions

You may have as many opportunities to revise work to meet the quality standard as you like before the final portfolio is due. I will comment on/regrade revisions every three weeks, so be sure to turn them in (on Canvas) by midnight on Thursday if you want me to review your work with that batch. Otherwise, you'll need to wait until the next batch.

Grading Scale

A 93-100	B 83-87.5	C 70-77.5	F <59.5
AB 88-92.5	BC 78-82.5	D 60-69.5	

CLASSROOM COMMUNITY

Anti-racist classroom – A brave space

I am committed to making the classroom as open and as safe a space as possible for everyone. Doing so will require you to respect each other's differences. This means not judging each other based on perceptions of race, ethnicity, gender, ability, immigration status, appearance, ease with English language, etc. I will not tolerate disrespectful or racist behavior, comments, or microaggressions. I will make every effort to accommodate any physical, learning or other disabilities. If you are a McBurney student, please come see me after class or during my office hours to discuss accommodations.

We will discuss difficult topics in this class and I expect that each of you will have different levels of comfort and familiarity as we approach these topics. You should expect some discomfort, especially if you have not previously given much thought to how whiteness works. That said, my goal is to build with you a class experience that leaves you all feeling respected and valued. To make the classroom as equitable and welcoming as possible, we'll spend some time establishing and refining community ground rules. I cannot promise a space that is free of microaggressions

or assertions of white supremacy, but I will do my best to try, and to address problems as they arise. It is OK to make mistakes; expect to be called-in so that mistakes can become opportunities for learning.

Attendance

You may miss two classes without penalty. I recommend saving these “freebies” for unforeseen sick days. If you need to miss more classes, PLEASE CONTACT ME BEFORE the class you’ll miss so we can work out how you can best catch up. Important: Keep a record of the classes you attend. This is important for your portfolio, for which I’ll want a list of dates you were and were not in class. I won’t keep attendance, but in a small class, it is pretty easy to follow who doesn’t show up. Also, please don’t be late to class.

Notetakers

I am going to ask that you sign up to take thorough notes during class once during the semester. I expect we will face issues related to illness and attendance because of the ongoing pandemic. I want to be sure that anyone who misses part or all of a class has a way to access our discussions. I’ll create a sign-up sheet and shared Google doc for these notes. You can do this as a community engagement action.

ACADEMIC INTEGRITY

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison’s community of scholars in which everyone’s academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to studentconduct.wiscweb.wisc.edu/academic-integrity/.

Plagiarism amounts to turning in work or participating in class activities based on work that is not your own. It is a serious offense and grounds for failing an assignment (or worse) in my classroom. You must give attribution in your written work both when you directly quote someone else’s words and when you use their ideas. It is your responsibility to understand what plagiarism is and to avoid it. For more information, consult the UW-Madison Writing Center: <http://writing.wisc.edu/Handbook/QuotingSources.html>

If you would like further guidance, just ask.

OPEN-DOOR

My office doors are always open to you as students and as people should you need to discuss anything broadly related to your ability to succeed in school, whatever it may be.

I also want you to know that, like most faculty, I am obligated to report all incidents of sexual assault reported to me to the university. I want to help in a way that would be helpful and comfortable to you, but please bear this in mind as you gauge who you chose to speak with and

how much you tell us. Other options include: [Campus resources for victims](#). [Confidential reporting options](#).

Office Hours: You are my only class this semester, so my office hours are meant for you. Please [sign up at the link here](#) (also in Canvas). You don't need to write to me before you sign up, unless there is something you'd like me to read or consider before we talk. We can do in-person or Zoom. If in person, I expect visitors to my office to wear a mask. Most meetings can be 15 minutes, but if you'd like to chat longer or would like me to read more than 1 page of writing, then sign up for 2 sessions in a row.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA.

<http://mcburney.wisc.edu/facstaffother/faculty/syllabus.php>

QUARANTINE OR ISOLATION DUE TO COVID-19

Students should continually monitor themselves for COVID-19 symptoms and get tested for the virus if they have symptoms or have been in close contact with someone with COVID-19. Students should reach out to me as soon as possible if they become ill or need to isolate or quarantine, in order to make alternate plans for how to proceed with the course. Students are strongly encouraged to communicate with me concerning their illness and the anticipated extent of their absence from the course. I will work with you to provide alternative ways to complete the course work.

Credit Standard

This is a 3-credit class. The credit standard for this course is met by an expectation of a total of 135 hours of student engagement with the course learning activities (at least 45 hours per credit), which include regularly scheduled instructor:student meeting times (2 hours per week for 15 weeks), as well as reading, writing, and peer-review work as described in the syllabus (below).

SEMESTER OVERVIEW

Week & Date	Theme	Assignment	Due Dates
1 – Sept 8	Introductions	DEI Article	
2 – Sept 13, 15	Core Concepts	1-sentence essay 1	13th: DEI Article
3 – Sept 20, 22	Settler Colonialism & the University	Primary source 1; Response essay 1	
4 – Sept 27, 29	Scientific Racism	1-sentence essay 2	
5 – Oct 4, 6	Science and Slavery	Primary source 2	*Revisions
6 – Oct 11, 13	Empire and Sciences of Territory	Primary source 3; response essay 2	
7 – Oct 18, 20	Environmental Determinism	Primary source 4;	
8 – Oct 25, 27	Ideologies of Improvement	1-sentence essay 3; Primary source essay	*Revisions
9 – Nov 1, 3	Whiteness and Environmentalism	Primary source 5; 1-sentence essay 4	
10 – Nov 8, 10	Rethinking Environmentalism	Response essay 3	10th: Primary source essay draft
11 – Nov 15, 17	Doing Science Better: Anti-Colonial Science	1-sentence essay 5	*Revisions
12 – Nov 22, 24	Catch up day/ Thanksgiving		22nd: Final primary source essay
13 – Nov 29, Dec 1	Doing Science Better: Anti-Racist Science		
14 – Dec 6, 8	Doing Science Better: Manifestos	Manifestos & Science Fair	*Revisions: Last call!
15 – Dec 13	Reflections		
Dec 17, Midnight	FINAL: Portfolio due		

WEEKLY COURSE PLAN

All the readings will be available as links below or PDFs on our Canvas class site. The following plan may change; be sure to refer to Canvas for the most up-to-date syllabus.

Important: You should do the reading assigned before class and bring a copy with you, either printed out or on your laptop or tablet (not your phone!).

WEEK 1

Thursday, September 8 Week 1 - Introductions

Reading: None.

In class: Introductions, syllabus review & a pre-quiz

Assigned: Find an article, twitter essay, or organization's statement on anti-racism or diversity and inclusion in the science of your choice. Bring a copy to class on Sept 13 and be prepared to share it.

WEEK 2 Core Concepts: Whiteness, Racial Capitalism, Extractivism

Tuesday, September 13 - White privilege and the sciences

Readings:

- Peggy McIntosh, "[White Privilege: Unpacking the Invisible Knapsack](#)," *Peace and Freedom Magazine*, July/August 1989, pp 10-12.
- Jeffrey Mervis, "[The Toll of White Privilege](#)," *Science* March 1, 2022
- Tema Okun et al., Team Okun, "[white supremacy culture](#)," *Dismantling Racism*, 1999.
- Skim this website: <https://www.whitesupremacyculture.info>

Due: Bring statement on anti-racism/ or diversity and inclusion

Thursday, September 15 Racial Capitalism & Extractivism

Reading:

- Anon. "[Racial Capitalism](#)" Wikipedia.
- Liboiron, Max. (2021). "[A wee primer on Colonialism](#)," In *CLEAR Lab Book*, CLEAR. St. John's, NL: Memorial University.

Assigned: 1-sentence essay (Due end of class to Canvas)

WEEK 3 Settler Colonialism & the University

Tuesday, September 20

Reading:

- Tiya Miles, "[Dispossession](#)," *The 1619 Project*, N. Hannah-Jones, C. Roper, I. Silverman, and J. Silverstein, eds. New York: One World, 2021, p. 135-155 (paper edition). Online: pp. 165-188.
- Robert Lee and Tristan Ahtone, "[Land-grab universities](#)" *High Country News*, March 30, 2020.

Assigned: Primary source analysis (Due Thursday 22 to Canvas)

Thursday, September 22 First Nations Cultural Landscape Tour

Reading: None.

In class: First Nations Cultural Landscape Tour of Campus – Meet at Memorial Union at 9:20 & be prepared to be outside, walking. There will be steps and inclines. *If this poses a challenge for you, email me so we can accommodate! (And, if you want coffee, get in line at Peet's by 9:10!)

Also note: No photos during the tour. Please respect our host.

Assigned: Response essay (Due Thursday, Sept 29 *before class* so we can do peer-reviews in class)

WEEK 4 -- Scientific Racism: from the Enlightenment to Eugenics

Tuesday, September 27

Reading:

- Jamelle Bouie, "[The Enlightenment's Darker Side](#)," *Slate*, June 5, 2018.
- Mia Bay, "'Of One Blood God Created All the Nations of Men' African-Americans Respond to the Rise of Ideological Racism, 1789 –1830," *The White Image in the Black Mind: African-American Ideas about White People, 1830-1925*, Oxford University Press, 2000.

Thursday, September 29

Reading:

- Banu Subramaniam, "A Genealogy of Variation: The Enduring Debate on Human Differences," *Ghost Stories for Darwin: The Science of Variation and the Politics of Diversity*, University of Illinois Press, 2014, (pp. 45-69)

In class: response essay peer reviews

Assigned: 1-sentence essay

WEEK 5 -- Science and Slavery

If you're doing honors meet with me by the end of the week to develop your project.

Tuesday, October 4

Reading:

- Sam Kean, "Science's debt to the slave trade," *Science*, 5 Apr 2019 Vol 364, Issue 6435, pp. 16-20.
- James Delbourgo, "Sir Hans Sloane's Milk Chocolate and the Whole History of the Cacao," *Social Text* 106, Spring 2011.

Thursday, October 6

Reading: None.

In class: Meet in Special Collections, Memorial Library, 9th Floor

Assigned: Primary source analysis

***Revisions due by midnight!**

WEEK 6 Empire & Sciences of Territory

Tuesday, October 11 -- Guest teacher: Juan Camilo Franco

Reading: TBD

Assigned: Primary source

Thursday, October 13 -- The Colonial History of Geology

Reading:

- Gustave Lester and Tamara Pico, "[The Colonial History of Geology in the United States](#)," Part 1, Insurrect! November 2021
- Gustave Lester and Tamara Pico, "[The Colonial History of Geology in the United States](#)," Part 2, Insurrect!
- Tamara Pico, "[The Darker Side of John Wesley Powell](#)," *Scientific American*, September 9, 2019.

Assigned: Response essay

WEEK 7 Environmental Determinism – Climate and Race

Tuesday, October 18

Reading:

- Simon Donner, "[The Ugly History of Climate Determinism Is Still Evident Today](#)," *Scientific American*, June 24, 2020.
- Martin W Lewis, Environmental Determinism, Ellsworth Huntington and the Decline of Geography, Geocurrents

Assigned: Primary source analysis

Thursday, October 20 No class, take a break

WEEK 8 Ideologies of Improvement

Tuesday, October 25

Reading:

- Levi Van Sant, "The long-time requirements of the nation": The US Cooperative Soil Survey and the Political Ecologies of Improvement," *Antipode* Vol. 53 No. 3 2021 pp. 686–704

Assigned: 1-sentence essay

Thursday, October 27 - Return to Special Collections

Reading: None.

In class: Meet in Special Collections, Memorial Library, 9th Floor

Assigned: Primary source essay

***Revisions due by midnight!**

WEEK 9 – Whiteness & Environmentalism

Tuesday, November 1

Reading:

- Richard Grove, "The Origins of Environmentalism," *Nature* 345, no. 6270 (1990): 12.
- Jedediah Purdy, "[Environmentalism's Racist Past](#)," *The New Yorker*, August 13, 2015.

Assigned: Primary source analysis

Thursday, November 3

Reading:

- J. Drew Lanham, "[9 Rules for the Black Birdwatcher](#)" *Orion*. October 25, 2013.
- Watch: [J. Drew Lanham 9 Rules Video: \[3 min\]](#)
- Michael Brune, "[Pulling Down Our Monuments](#)," *Sierra Club Blog*, July 22, 2020.
- Listen to Robert Hanna / Carolyn Finney podcast (1h 20 mins):
<https://www.youtube.com/watch?v=VVC1AsZHfxk> OR
<https://play.google.com/music/listen...>

Assigned: 1-sentence essay

WEEK 10 Rethinking Environmentalism

Tuesday, November 8

Reading:

- **Everyone:** Aldo Leopold, "The Land Ethic," *The Sand County Almanac*.
- **Everyone:** Anon, "Understandings the Land Ethic" Aldo Leopold Foundation Blog, May 29, 2015. <https://www.aldoleopold.org/post/understanding-land-ethic/>
- **If your birthday is January – June:** Kyle Powys Whyte, "How Similar are Indigenous North American and Leopoldian Land Ethics?" Essay for the forthcoming *Revisiting Aldo*

Leopold's Land Ethic: Emerging Cultures of Sustainability. Edited by Teresa Trusty and William Forbes. Stephen F. Austin University Press. March 1, 2015. 15pp.

- *If your birthday is July-December*. Lauret Savoy, "Alien Land Ethic: The Distance Between," *Trace* Berkeley, CA: Counterpoint, 2015, pp. 31-48.

Assigned: Response essay

Thursday, November 10

Reading: None.

Due: Primary source essay draft – bring to class for peer review

WEEK 11 -- Doing science better: Anti-colonial science

Tuesday, November 15

Reading:

- Kyle Powys Whyte, *Settler Colonialism, Ecology, and Environmental Injustice*, *Environment and Society: Advances in Research* 9 (2018): 125–144 © Berghahn Books.
- Kimmerer, Robin Wall, "Mishkos Kenomagwen: The Teachings of Grass," in *Braiding Sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants*. Minneapolis: Milkweed Editions, 2013, pp. 156-166.

Assigned: Manifestos for Better Science & 1-sentence essay

Thursday, November 17

Reading:

- Max Liboiron, "An Anti-Colonial Pollution Science," *Pollution is Colonialism*, Durham, NC: Duke University Press, 2021.
 - *If your birthday is January – June*, read pp. 113-136 [through the section on Compromise]
 - *If your birthday is July – December*, read: pp. 136-156 [start with the section on Obligation]

***Revisions due by midnight!**

WEEK 12

Tuesday, November 22 -- Catch up day

Reading: None.

Due: Final primary source essay (midnight)

In class: Workshop -- Peer reviews

Thursday, November 24 – Thanksgiving Break

WEEK 13 Doing science better: Anti-Racist Science

Tuesday, November 27

Reading:

- Ebony Omotola McGee, “Why Justice-Oriented STEM Is the Key to Getting and Keeping Students of Color in STEM,” *Black, brown, bruised: how racialized STEM education stifles innovation*. Cambridge, MA: Harvard Education Press, 2020.
- Eve Tuck, “Suspending Damage: A Letter to Communities,” *Harvard Educational Review* Vol. 79 No. 3 Fall 2009.

Thursday, December 1

Reading:

- (1s) Lisa Bowleg, “The Master’s Tools Will Never Dismantle the Master’s House”: Ten Critical Lessons for Black and Other Health Equity Researchers of Color, *Health Education & Behavior*,” 2021, Vol. 48(3) 237–249
- (2s) V. Bala Chaudhary and Asmeret Asefaw Berhel, “Ten simple rules for building an antiracist lab,” *PLoS Comput Biol* 16(10): e1008210.
- (3s) Hendratta N Ali et al., An actionable anti-racism plan for geoscience organizations, *Nature Communications*, (2021) 12:3794
- (3s) Max Liboiron, “Decolonizing geoscience requires more than equity and inclusion,” *Nature Geoscience*, Dec 2, 2021. <https://doi.org/10.1038/s41561-021-00861-7>

WEEK 14 – Manifestos for Better Science

Tuesday, December 6

Reading: None.

In class: Work day

Thursday, December 8

Reading: None.

In class: Science Fair!

*Revisions due – last call!

WEEK 15

Tuesday, December 13 – Last class

Reading: None.

In class: Post-quiz, reflections

FINAL Portfolio due: Saturday, December 17, by midnight.