

Johns Hopkins University
School of Education
Environmental Science as Social Justice
ED.810.533.01

Instructor(s):

Hunter Gehlbach	TA: Lindi Shepard
gehlbach@jhu.edu	lshepar6@jh.edu
www.huntergehlbach.com	
LinkedIn @HunterGehlbach	

Credit Hours: 3

Class Times: *Tuesdays 9:30 – 12:00; Shriver Hall Boardroom*

Official Course Description: In addition to posing an existential challenge, climate change presents one of education’s thorniest problems. Teachers eager to address Planetary Health, environmentalism, and sustainability face the typical hurdles that all teachers face—to facilitate understanding of challenging content and concepts, to engage their students, etc. But those aspiring to teach about sustainability face additional unique challenges.

First, they must delicately balance their learners’ emotions, being candid and honest while not overwhelming their learners with dread. Second, while the average algebra teacher doesn’t think much about behavior change, behaving differently is clearly a primary outcome for teachers of environmentalism. Third, few curricular topics have been politicized as much as climate science—so how should educators address key topics with skeptical students and/or hostile parents? Finally, a massive question of equity pervades environmental issues—how should teachers tackle these topics in a way that promotes more awareness, and more equitable outcomes for students and for broader society?

These challenges are daunting to say the least. In response, the course will provide strategies to help educators navigate these core issues as well as how to teach about planetary health while avoiding burnout and sustaining their own well-being.

Additional context: Teaching topics in environmental education may look starkly different in different parts of the country. The course orientation prepares students to teach this content anywhere which may require students to calibrate their expectations of the course in two ways: (a) that, even if you are convinced that you would only ever teach in the most liberal (or conservative) parts of the country that you will become a better teacher with an understanding of how you would, at least hypothetically, want to teach in the most conservative (or liberal) parts of the country; and (b) correspondingly, course readings, terminology, and philosophical orientations to thinking about the environment will cover a broad range of points of view—students are expected to put forth a good faith effort to charitably understand those perspectives that differ from one’s own.

Course goals/objectives: This course aspires to develop more impactful educators by helping students navigate the unique challenges of Planetary Health education. The course addresses multiple programmatic learning objectives, particularly the three below:

Program Learning Objectives:	Course Objectives: Upon completing this course, you should...	Learning Targets (& Assessments)
1c. Implementing effective pedagogical approaches for increasingly complex and multidisciplinary curricula.		
...identify which (a) Planetary Health topics of interest and (b) pedagogical strategies/practices/activities/etc. you wish to draw from in your teaching	<ul style="list-style-type: none">• Build, organize, and maintain resources to teach about Planetary Health topics (M.A. #1)• Capture and develop pedagogical approaches that appeal to you (M.A. #1)	
...be able to synthesize these topics and pedagogical strategies to apply them in a classroom lesson	<ul style="list-style-type: none">• Draw from your teaching journals to apply your resources and teaching strategies to your personal classroom settings (M.A. #1)	
...articulate your primary goals for teaching Planetary Health, including the outcomes you want for your students	<ul style="list-style-type: none">• Identify the value of Planetary Health for yourself & for students (M.A. #2)• For a given lesson, be able to articulate what student knowledge/understandings, attitudes, emotions, motivations, and behaviors should be developed (M.A. #1, 2)• Communicate those values to key audiences (M.A. #2)	
1e. Applying strategies to support K-12 students to process emotions and manage strong opinions/attitudes.		
...strategically and proactively develop strong social connections with students.	<ul style="list-style-type: none">• Hone strategies for developing strong teacher-student relationships (M.A. #1 & 2)• Develop intuitions for how/when to leverage these relationships (M.A. #1 & 2)	
...navigate (with increasing confidence) the broader (political) contexts of your teaching.	<ul style="list-style-type: none">• Design lessons and approaches that are responsive to multiple perspectives on important environmental issues. (M.A. #1, 2, 3)	
3b. Engage various stakeholders in a student’s life to provide collaborative, holistic, personalized support.		
...engage the wider community in teaching environmental issues.	<ul style="list-style-type: none">• Identify local organizations doing work around your identified Planetary Health issue (M.A. #1)• Develop an approach to communicate your philosophy with families (M.A. #2)• Connect individual behaviors with social impact (M.A. #3)	

Assignment Overview:

Due Date	Assignment	Weight
Ongoing	Resource Bank Contributions	5
2/6/25	Teaching Practices in Action: Ideally with a partner, enact (a) some content and (b) a practice from your teaching journal that illustrates how you might incorporate Planetary Health into the subject area you anticipate teaching.	20
3/31/25	Applied Teaching Philosophy: Articulation (in an applied form) of how you aspire to teach the content, disposition, and skills of Planetary Health education.	30
In class on 4/28/25	Social Impact Passion Project: Engage in a personally meaningful experience that promotes Planetary Health and reflect on how you leverage that experience for your students.	25

Evaluation and Grading: Your grade will consist of a possible total of 100 points. In addition to the possible points from the 3 major assignments above, you will receive 20 points for “Citizenship” as described in ‘the fine print’ section at the end of the syllabus.

Grading Scale

A = 93 -100%

A- = 90 - 92%

B+= 87 - 89%

B = 83 - 86%

B- = 80 - 82%

C+= 77 - 79%

C= 73 - 76%

C-= 70 - 72%

F= 69% and below

Please note: The grades of D+, D, and D- are not awarded at the graduate level.

Recommended Texts: (no required texts)

Bullard, R. D. (2018). *Dumping in Dixie: Race, Class, And Environmental Quality, Third Edition*. Routledge.

Worth, K. (2021). *Miseducation: How climate change is taught in America*. Columbia Global Reports.

WEEK	CONTENT
WEEK 1 1-21-25	How will you navigate the unique pedagogical challenges of teaching Planetary Health?
Themes <ul style="list-style-type: none"> - What is Planetary Health? - What is unique about the teaching, learning, and goals of Planetary Health education? - What are the essential features of Environmental Justice? 	
Readings <ul style="list-style-type: none"> - Gehlbach, H. (2022). Let's start thinking about climate change as a modern educational problem — and solve it. The Hechinger Report. https://hechingerreport.org/opinion-lets-start-thinking-about-climate-change-as-a-modern-educational-problem-and-solve-it/ - Gehlbach, H., Shepard, L., & Myers, S. S. (2024). Education's pivotal role in advancing planetary health. https://doi.org/10.35542/osf.io/8f7y2 - Bigelow, B., & Swinehart, T. (2014). <i>A people's curriculum for the earth</i>. Rethinking Schools. Introduction Climate Change Timeline (pg. 104) - All explanations of the Collective Assignment and all Major Assignments 	
WEEK 2 1-28-25	How will you read the political landscape? How will you find common ground?
Themes <ul style="list-style-type: none"> - How should Planetary Health educators address the local context? ...the broader context? - What are the benefits of establishing common ground? What are the risks/costs? 	
Readings <ul style="list-style-type: none"> - Bruine de Bruin, W., & Sinatra, G. M. (2024). If you want Americans to pay attention to climate change, just call it climate change. <i>The Conversation</i>. https://theconversation.com/if-you-want-americans-to-pay-attention-to-climate-change-just-call-it-climate-change-235002 - Choi-Schagrin, W. (2022, Nov 2). Teaching climate change when the curriculum avoids it. <i>New York Times</i>. https://www.nytimes.com/2022/11/01/climate/middle-school-education-climate-change.html 	

- Eccles, R. G. (2023). What I've learned from conservatives who are addressing the challenge of climate change. Forbes.
<https://www.forbes.com/sites/bobeccles/2023/12/31/what-ive-learned-from-conservatives-who-are-addressing-the-challenge-of-climate-change/>
- Lynas, M., Houlton, B. Z., & Perry, S. (2021). Greater than 99% consensus on human caused climate change in the peer-reviewed scientific literature. *Environmental Research Letters*, 16(11), 114005. <https://doi.org/10.1088/1748-9326/ac2966>
- NBC News. (2023). Conservative environmentalist discusses the politics of climate change. <https://www.youtube.com/watch?v=MK9lfBTzNeE>
- Wong, A. (2023, September 24). How to teach about climate change? Education in many US schools is lacking, students claim. *USA Today*.
<https://www.usatoday.com/story/news/education/2023/09/24/climate-week-2023-youth-protests-education/70930836007/>

→ **Recommended Assignments:** Log your first entry into the Collective Assignment.

WEEK 3
2-4-25

From political context to classroom context: How will you infuse Planetary Health into other content?

Themes

- For teachers not assigned to teach environmental science, earth science, etc. how will you incorporate Planetary Health into your course?
- How important is it for you to use local resources to make the issues come to life? How important is it for your students to have a global perspective?
- In what ways, if at all, do you want to teach core issues and concepts differently depending on whether you are teaching environmental science versus a less centrally related course?

Readings

- Bigelow, B., & Swinehart, T. (2014). *A people's curriculum for the earth*. Rethinking Schools. (pp. 13-16). Reading the World in a Loaf of Bread
- Environmental Justice Mapping Resource <https://ejscreen.epa.gov/mapper/> (NY-specific, but with regional/national):
https://drive.google.com/file/d/1csIogR5sVWNpi8Pu6CXcrdALyYP6Jg8Z/view?usp=drive_link
- [Find your own reading/listening/viewing to make Planetary Health come to life locally for your students within your content](#)

Assignments

Major Assignment #1 Due 11:59 pm on 2-6-25**WEEK 4
2-11-25****How do we balance issues of equity/justice with the need for rapid change with the need to embrace complexity?****Themes**

- What ethical approach do you want to embrace in your personal approach to Planetary Health? How will you support your students to explore the potential ethical stances that they might take?
- How do you want your students to think about the role of race and socio-economic status in the context of environmental justice and Planetary Health issues?
- How do you think about the timing/urgency of Planetary Health education? How do you want your students to think about it? What would it look like to “bend the curve”?
- How do you want to navigate the level of nuance and complexity that you present to students given your thinking on the previous items?

Readings

- Bullard, R. D., & Isaacson, W. (2020). *How environmental racism shapes the U.S.* <https://www.pbs.org/video/what-environmental-racism-robert-bullard-explains-yszys6/>
- Foster, A., Cole, J., Petrikova, I., Farlow, A., & Frumkin, H. (2020). Planetary health ethics. In S. S. Myers & H. Frumkin (Eds.), *Planetary health: Protecting nature to protect ourselves* (pp. 453-473). Island Press.
- Jones, V. (2010). *The economic injustice of plastic.* https://www.ted.com/talks/van_jones_the_economic_injustice_of_plastic?subtitle=en
- Pellow, D. (2020). *Polluting the voiceless.* https://www.youtube.com/watch?v=_fjSuR9onC4
- Ryssdal, K. (2021). White Gold (No. Episode 1) In *How we survive.* <https://www.marketplace.org/shows/how-we-survive/white-gold/>
- Ryssdal, K. (2021). The necessary evil (No. Episode 2) In *How we survive.* <https://www.marketplace.org/shows/how-we-survive/the-necessary-evil/>

**WEEK 5
2-18-25****Who are your learners? Who are your constituencies? Who are your resources? How can you reach them all?****Themes**

- At the societal level, we need Planetary Health education for all learners from pre-K-to-gray... how will you address this need despite a very clearly defined target population that you are responsible for?

<ul style="list-style-type: none"> - At the local level, how might you borrow ideas from the “Campus as a Living Lab” field trip? - What would it look like to imagine teaching Planetary Health as a Team Sport? 	
Readings <ul style="list-style-type: none"> - Gehlbach, H., Zhang, Q., & Cornwall, K. J. (2023, August 31). Scientific storytelling for the current climate. <i>APS Observer</i>, 36(5). https://www.psychologicalscience.org/observer/scientific-storytelling - Lawson, D. F., Stevenson, K. T., Peterson, M. N., Carrier, S. J., L. Strnad, R., & Seekamp, E. (2019). Children can foster climate change concern among their parents. <i>Nature Climate Change</i>, 9(6), 458-462. https://doi.org/10.1038/s41558-019-0463-3 - van der Linden, S., Maibach, E., & Leiserowitz, A. (2015). Improving public engagement with climate change: Five “best practice” insights from psychological science. <i>Perspectives on Psychological Science</i>, 10(6), 758-763. https://doi.org/10.1177/1745691615598516 	
WEEK 6 2-25-25	Cognition: How do you need to think in order to teach students to think about Planetary Health?
Theme <ul style="list-style-type: none"> - What is the role of systems thinking in Planetary Health education? - To what extent are humans a part of nature or apart from nature? 	
Readings <ul style="list-style-type: none"> - Bigelow, B., & Swinehart, T. (2014). <i>A people’s curriculum for the earth</i>. Rethinking Schools. (pp. 8-12). Smarter than Your Average Planet; Interconnectedness-the Food Web - Nisbett, R. E., & Miyamoto, Y. (2005). The influence of culture: Holistic versus analytic perception. <i>Trends in Cognitive Sciences</i>, 9(10), 467-473. - Wiggan, A. (2022, October 22). The case for recognizing Indigenous knowledge as science. https://www.youtube.com/watch?v=FpJCYB_cCEQ 	
WEEK 7 3/4/25	How will you support learners’ autonomy in an age of misinformation?
Theme <ul style="list-style-type: none"> - How should you “meet students where they are” if they believe misinformation? 	

<ul style="list-style-type: none"> - How do you want to navigate situations in which you support students to ‘construct their own knowledge’ and their constructed understandings are at odds with scientific understanding? 	
Readings <ul style="list-style-type: none"> - Gawronski, B., Nahon, L. S., & Ng, N. L. Debunking three myths about misinformation. <i>Current Directions in Psychological Science</i>, 0(0), 09637214241280907. https://doi.org/10.1177/09637214241280907 - Lewandowsky, S., & Oberauer, K. (2016). Motivated rejection of science. <i>Current Directions in Psychological Science</i>, 25(4), 217-222. https://doi.org/10.1177/0963721416654436 	
WEEK 8 3/11/25	Cultivating pro Planetary Health attitudes
Theme <ul style="list-style-type: none"> - How might you leverage nature journaling to influence Planetary Health attitudes? 	
Readings <ul style="list-style-type: none"> - Laws, J. M., & Lygren, E. (2020). How to teach nature journaling: A science and art manual for parents, educators, and naturalists. Heyday Books. https://johnmuirlaws.com/product/how-to-teach-nature-journaling/ (Foreword & Introduction) - The Climate & Resilience Education Task Force Youth Steering Committee. (2022). Climate education: Teachers on the frontlines. https://vimeo.com/783736166 	
NO CLASS – SPRING BREAK	
WEEK 9 3/25/25	Emotions: How will you balance realism with hope?
Themes <ul style="list-style-type: none"> - What is the right balance of hope, urgency, and reality for teachers to strike? - Given a heterogeneous classroom, how do you navigate the existential emotional questions for younger vs. older students as well as for students at different maturity levels? 	
Readings	

- McGrath, C., & Schapira, K. (2024). An educator's guide to climate emotions. <https://www.climatepsychology.us/educators-guide-climate-emotions>
- Tamir, M. (2009). What do people want to feel and why?: Pleasure and utility in emotion regulation. *Current Directions in Psychological Science*, 18(2), 101-105. <https://doi.org/http://dx.doi.org/10.1111/j.1467-8721.2009.01617.x>
- Tobgay, T. (2016). *This country isn't just carbon neutral -- it's carbon negative*. TED. https://www.ted.com/talks/tshering_tobgay_this_country_isn_t_just_carbon_neutral_it_s_carbon_negative/transcript?subtitle=en

Assignments

Major Assignment #2 Due 11:59 pm on 3-31-25

WEEK 10
4-1-25

Resilience: How will you navigate the engagement paradox?

Themes

- Possible Guest Speaker: Kate Cornwall
- How do you want to balance students' positive and negative emotions about climate change so that they remain motivated and engaged?
- How will you balance a classroom full of students who will vary widely in their range of emotional reactions?

Readings

- Rousell, D., & Cutter-Mackenzie-Knowles, A. (2020). A systematic review of climate change education: giving children and young people a 'voice' and a 'hand' in redressing climate change. *Children's Geographies*, 18(2), 191-208. <https://doi.org/10.1080/14733285.2019.1614532>
- U.S. Climate Resilience Toolkit. <https://toolkit.climate.gov>
- Plus a likely reading from Kate

WEEK 11
4-8-25

How will you spark student motivation?

Themes

- What are the key barriers to your students being motivated to engage with Planetary Health issues?
- If you wanted to increase students' motivation to engage with Planetary Health issues, how would you think about doing so theoretically? Practically?

Readings

What is the right balance between local action and global impact?

- A People's Curriculum For the Earth. How My Schooling Taught Me Contempt for The Earth (pg 36).
- Gifford, R. (2011). The dragons of inaction: Psychological barriers that limit climate change mitigation and adaptation. *American Psychologist*, 66(4), 290-302.
<https://doi.org/10.1037/a0023566>
- Brick, C., Bosshard, A., & Whitmarsh, L. (2021). Motivation and climate change: A review. *Current Opinion in Psychology*, 42, 82-88.
<https://doi.org/https://doi.org/10.1016/j.copsyc.2021.04.001>

WEEK 12
4-15-25

How will you translate that motivation into student action?

Themes

- What are the behavioral changes that you would like to see in your students? That are appropriate for you to push for given your context?
- What supports might you offer students to facilitate continued actions on Planetary Health into their futures?

Readings

- Schreiber, M. (2024). Charmed City. *Hopkins Bloomberg Public Health*, (Fall/Winter), 16-23.
- Thunberg, G. (2018). *The disarming case to act right now on climate change*. TEDxStockholm.
https://www.ted.com/talks/greta_thunberg_the_disarming_case_to_act_right_now_on_climate_change?subtitle=en
- Fregni, J. (2022, April 21). Students combat air pollution in 'Asthma Alley'.
<https://www.teachforamerica.org/stories/students-combat-pollution>
- Marks-Block, T. (2011). Science for the people: High school students investigate community air quality. *Rethinking Schools*, 25(3).
<https://rethinkingschools.org/articles/science-for-the-people-high-school-students-investigate-community-air-quality/>

WEEK 13
4-22-25

The social side of Planetary Health: How do you make those actions and behaviors collective?

Theme

- Collective action is a vital aspect of Planetary Health... but schooling is often a reasonably individualistic enterprise in the U.S. (especially in terms of typical approaches to evaluation). How should teachers model, discuss, and train students for the collective action that will be needed to improve the planet's health?

Readings

- Han, H., & Barnett-Loro, C. (2018). To support a stronger climate movement, focus research on building collective power. *Frontiers in Communication*, 3.
<https://doi.org/10.3389/fcomm.2018.00055>
- Hayhoe, K. (2018). *The most important thing you can do to fight climate change: Talk about it*.
https://www.ted.com/talks/katharine_hayhoe_the_most_important_thing_you_can_do_to_fight_climate_change_talk_about_it?subtitle=en

WEEK 14
4-29-25

Evaluation: How do you know if you are making a difference?

Theme

- How will you know how successfully you have met your teaching goals?
- What are your best approaches to figuring out what your students have learned?
- How will you evaluate your success at infusing the dispositions you want your students to embrace?

Readings

- No Readings 😊

Assignments

Major Assignment #3 Due 11:59 pm on 4-28-25

Final chance to submit Collective Assignment entries: 4/30/25

Policy Statements

The Fine Print

Grading/Timeliness. Teaching is a deadline sensitive profession. If you are unprepared for a particular day's lesson, you still have to show up and teach. Accordingly, this course expects punctual submission of work. If this is something you have struggled with historically, this is an opportune moment to identify strategies to mend your procrastinating ways. The teaching team is here to help you strategize and brainstorm different tactics to try out this semester. I deduct 5% of the total possible points per day that an assignment is late.

Auditing. Auditing the course is fine. Auditors will not be getting feedback from peers or the teaching staff unless they are teaming up with a classmate who is taking the course for credit. Bear in mind that you will get less from the course if you decide to attend lectures but not do the readings and assignments.

Attendance/Participation

SOE Attendance/Participation Policy Statement:

Participation in lectures, discussions, and other activities is an essential part of the instructional process. Students are expected to attend class regularly; those who are compelled to miss a class should inform me of the reasons for absences at least 36 hours ahead of time as it may influence certain activities we have planned. Students who expect to miss several class sessions for personal, professional, religious or other reasons should speak with the instructor before enrolling.

As will be the case with the classes that you teach, our class will start on time. If you are late, please do not ask questions regarding what we have already covered. If you have to miss class, I expect you to catch up on what you missed with a classmate or two first, then if you have additional questions, please see the teaching team.

Academic Continuity

Please note that in the event of serious consequences arising from extreme weather conditions, communicable health problems, or other extraordinary circumstances, the School of Education may change the normal academic schedule and/or make appropriate changes to course structure, format, and delivery. (For example, a class session may be delivered online via Blackboard in the event that the regularly scheduled face-to-face class session is cancelled.) In the event such changes become necessary, information will be posted on the School of Education website and communicated to you via email and/or Blackboard.

Citizenship. In a class where students depend upon each other to a significant extent for advice, critique, and inspiration, the effort and attitude of everybody matters critically—we are all on the same team. I expect everybody to participate, to listen, and to build off of each other's ideas. Thus, this component of your grade allows me to make sure that you follow through on the little things that are key to a productive learning experience for all.

Academic Conduct

The School of Education places the highest value on intellectual integrity and personal trust within our community. All SOE students assume an obligation to conduct themselves in a manner appropriate to the Johns Hopkins University's mission as an institution of higher education and with accepted standards of ethical and professional conduct. Students must demonstrate personal integrity and honesty at all times in completing classroom assignments and examinations, in carrying out their fieldwork or other applied learning activities, and in their interactions with others. Students are obligated to refrain from acts they know or, under the circumstances, have reason to know will impair their integrity or the integrity of the University. Refer to the school's website for more information regarding the academic misconduct policy.

Please note that student work may be submitted to an online plagiarism detection tool at the discretion of the course instructor. If student work is deemed plagiarized, the course instructor shall follow the policy and procedures governing academic misconduct as laid out in the School of Education's Academic Catalog.

Diversity

The Johns Hopkins School of Education (SOE) defines diversity as follows:

The United States is rich in diversity and its influence is global. Mindful of this, the SOE defines diversity in a myriad of ways: by ethnicity, religion, race, gender identity, age, national origin, exceptionalities, ideology, sexual orientation and socioeconomic status. The education of our candidates involves a respect for diversity, meaning that each individual should be recognized for his or her own abilities, interests, ideas and cultural identity.

General Academic Support & Writing. Students are encouraged to take advantage of various writing resources at the SOE and across campus more broadly. For example, the SOE offers some [Writing Support Resources](#) that you may find helpful. These [How To Guides](#) from the library and this [Library Services](#) page may also be helpful. Finally, SOE offers an Academic Writing Consultant. Please email [Hilary Leithauser](#) with questions or to make an appointment.

Students with Disabilities - Accommodations and Accessibility

Johns Hopkins University values diversity and inclusion. We are committed to providing welcoming, equitable, and accessible educational experiences for all students. Students with disabilities (including those with psychological conditions, medical conditions and temporary disabilities) can request accommodations for this course by providing an Accommodation Letter issued by Student Disability Services (SDS). Please request accommodations for this course as early as possible to provide time for effective communication and arrangements.

For further information please contact Student Disability Services at soe.disabilityservices@jhu.edu.

Managing Stress. Personal concerns such as stress, anxiety, relationships, depression, cultural differences, can interfere with the ability of students to succeed and thrive. For helpful resources, please reach out to Teri Murray (410) 516-5430 or [Johns Hopkins Student Assistance Program](#) (JHSAP), at 443-287-7000.

Course Evaluation

Please remember to complete an online course evaluation survey for this course. These evaluations are an important tool in the School of Education's ongoing efforts to improve instructional quality and strengthen its programs. The results of the course evaluations are kept anonymous – your instructor will only receive aggregated data and comments for the entire class. An email with a link to the online course evaluation form will be sent to your JHU email address towards the end of the course. Thereafter, you will be sent periodic email reminders until you complete the evaluation. There is also a module on the My Institution page where you can access the evaluation and prompts to complete the evaluation when you log into Blackboard. Please remember to activate your JHU email account and to check it regularly. (Please note that it is the School of Education's policy to send all faculty, staff, and student email communications to a JHU email address, rather than to personal or work email addresses.) If you are having difficulty accessing the course evaluation, you haven't received an email notification about the course evaluation, or if you have any questions in general about the course evaluation process, please contact SOEEvalKit@jhu.edu. (Please note that if a course has fewer than three enrolled students, SOE will not conduct an online course evaluation survey for the course.)

Above all, please come see me – we'll work something out!