

## Term Information

Effective Term Spring 2023

## General Information

Course Bulletin Listing/Subject Area Earth Sciences  
Fiscal Unit/Academic Org School of Earth Sciences - D0656  
College/Academic Group Arts and Sciences  
Level/Career Graduate  
Course Number/Catalog 8871  
Course Title Pursuing justice, equity, diversity, and inclusion in the Earth Sciences  
Transcript Abbreviation JEDI in STEM  
Course Description Discuss issues of justice, equity, diversity and inclusion in the Earth sciences and take practical steps to engage in equitable and inclusive practices in research and education. Students have the option to combine the 2-credit seminar with 1 additional credit to pursue an individual research topic involving justice, equity, diversity and inclusion in the Earth sciences.  
Semester Credit Hours/Units Variable: Min 2 Max 3

## Offering Information

Length Of Course 14 Week, 12 Week, 8 Week, 7 Week, 6 Week, 4 Week  
Flexibly Scheduled Course Never  
Does any section of this course have a distance education component? No  
Grading Basis Letter Grade  
Repeatable No  
Course Components Seminar  
Grade Roster Component Seminar  
Credit Available by Exam No  
Admission Condition Course No  
Off Campus Never  
Campus of Offering Columbus

## Prerequisites and Exclusions

Prerequisites/Corequisites graduate standing  
Exclusions  
Electronically Enforced No

## Cross-Listings

Cross-Listings

## Subject/CIP Code

Subject/CIP Code 40.0601  
Subsidy Level Doctoral Course  
Intended Rank Masters, Doctoral

## Requirement/Elective Designation

The course is an elective (for this or other units) or is a service course for other units

## Course Details

### Course goals or learning objectives/outcomes

- An in-depth understanding of justice, equity, diversity and inclusion in the Earth sciences and the skills to take practical steps to engage in equitable and inclusive practices in research and education.

### Content Topic List

- Discuss the importance of diversity, equity and inclusion in earth science.  
Learn about Title VI of the Civil Rights Act and history of environmental justice.  
Build a science identity and appreciate scientists as whole people.
- Learn your implicit biases, and practice strategies to mitigate implicit bias and the impacts of stereotype threat.
- Research a scientist in an underrepresented group as a possible collaborator, graduate school advisor, or postdoctoral research supervisor.
- Map your mentor network and learn how effective mentoring can improve diversity and inclusion in STEM.  
Explore privilege and discuss what you can do with your privileges.
- Discuss the purpose of a land acknowledgement statement and write and practice including a land acknowledgement statement in written and oral presentations.
- Learn to recognize implicit bias in recommendation letters and learn how to avoid bias in written communication.
- Develop and write statements on teaching and diversity for academic positions.
- Optional (+1 credit): pursue independent research on a topic of diversity in education, racial justice, or environmental justice of your choosing.

### Sought Concurrence

No

## Attachments

- EARTHSC 8871 syllabus DRAFT v2.docx: syllabus

*(Syllabus. Owner: Panero, Wendy R)*

## Comments

## Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Panero, Wendy R	09/08/2022 10:13 AM	Submitted for Approval
Approved	Panero, Wendy R	09/08/2022 10:14 AM	Unit Approval
Approved	Vankeerbergen, Bernadette Chantal	10/15/2022 12:27 PM	College Approval
Pending Approval	Cody, Emily Kathryn Jenkins, Mary Ellen Bigler Hanlin, Deborah Kay Hilty, Michael Vankeerbergen, Bernadette Chantal Steele, Rachel Lea	10/15/2022 12:27 PM	ASCCAO Approval

# EARTHSC-8871 – Pursuing justice, diversity, equity, and inclusion in the Earth Sciences (Spring 2023)

Lecture: TuTh 12:45-1:40PM (and 1:55-2:50PM Th for those enrolling in 3 units)

Units: 2 or 3 units\*\* see distinction below

Grading Basis: A-E

Instructors: Professors Audrey Sawyer (sawyer.143) & Elizabeth Griffith (griffith.906)

Professor Elizabeth Griffith	Professor Audrey Sawyer
<a href="mailto:Griffith.906@osu.edu">Griffith.906@osu.edu</a> , 614-688-4273	<a href="mailto:Sawyer.143@osu.edu">Sawyer.143@osu.edu</a> , 614-292-8383
327 Mendenhall Lab	202 Orton Hall

Office Hours: Sawyer: Th 11:45-12:45 (Virtual, Zoom links on Carmen)

Griffith: M 1-2:30pm (Virtual, Zoom links on Carmen)

Required Textbooks: None. Reading material provided on Carmen.

Prerequisites: None.

Catalog Course Description: Discuss issues of justice, equity, diversity and inclusion in the Earth sciences and take practical steps to engage in equitable and inclusive practices in research and education.



Image from World Economic Forum <https://www.weforum.org/agenda/2020/08/science-stem-support-inclusion-diversity-equality/>

Course objectives:

1. Discuss the importance of diversity, equity and inclusion in earth science.
2. Learn about Title VI of the Civil Rights Act and history of environmental justice.
3. Build a science identity and appreciate scientists as whole people.
4. Learn your implicit biases, and practice strategies to mitigate implicit bias and the impacts of stereotype threat.

5. Research a scientist in an underrepresented group as a possible collaborator, graduate school advisor, or postdoctoral research supervisor.
6. Map your mentor network and learn how effective mentoring can improve diversity and inclusion in STEM.
7. Explore privilege and discuss what you can do with your privileges.
8. Discuss the purpose of a land acknowledgement statement and write and practice including a land acknowledgement statement in written and oral presentations.
9. Learn to recognize implicit bias in recommendation letters and learn how to avoid bias in written communication.
10. Develop and write statements on teaching and diversity for academic positions.
11. Optional (+1 credit): pursue independent research on a topic of diversity in education, racial justice, or environmental justice of your choosing.

Course description: We will discuss issues of justice, equity, diversity and inclusion in the Earth sciences and take practical steps to engage in equitable and inclusive practices in research and education. Students have the option to combine the 2-credit seminar with 1 additional credit to pursue an individual research topic involving justice, equity, diversity and inclusion in the Earth sciences.

\*\* 3-credit option: Students will engage in original, novel research on some aspect of diversity, equity and inclusion or social justice relevant to earth sciences. Examples of projects include conducting a survey, mining public datasets or published literature for environmental justice research, or mining journal databases to analyze some topic of JEDI in STEM. This work will be done independently or as a group outside of the 2-hour lecture period. The outcome will be a presentation of the new work in the form of a short 2-minute popup and an abstract draft for a conference.

**Grading:**

Full Participation In Class Discussions & Presentations	50% / 35%**
Assignments (approximately 6 over the semester)	50% / 35%**
Final project for 3-credit option	0% / 30%**

The expected grading scheme for this course is:

100-93% **A**; 92.9-90% **A-**; 89.9-87% **B+**; 86.9-83% **B**; 82.9-80% **B-**; 79.9-77% **C+**; 76.0-73% **C**; 72.9-70% **C-**; 69.9-67 **D+**; 66.9-60 **D**; <60 **E**

Final projects for the 3-credit option will be evaluated on active participation in the third hour of the course and completion of associated weekly research tasks (10%), and the following 2 deliverables (due week 15) with rubrics, each weighted equally (10% each):

1. A 2-minute popup talk showing research results and progress (1 slide)
2. A written abstract draft, intended for submission to a scientific meeting

Schedule for all students (subject to changes):

Week	Topic	Reading (on Carmen)	Assignment
1:	JEDI in earth sciences	Dutt et al. 2020	
2:	Title VI of the Civil Rights Act; Panel: survey of Env Justice (EJ) research	Bullard et al. 2020	
3:	Incorporating Env Justice in teaching and service		Create lecture material on an EJ topic OR connect with an EJ service opportunity

4:	Removing barriers to diversifying earth sciences: Building community and building a science identity	Marin-Spiotta et al. 2020 <i>Optional: Schinske et al. 2016, Hazari et al. 2013</i>	
5:	Implicit biases; Bias in who we work with	Hanson et al. 2020 <i>Optional: Freeman and Huang (2015)</i>	Research a potential new collaborator
6:	Bias in who we cite	Dworkin et al. 2020	
7:	Bias in recommendation letters	Dutt et al. 2016	
8:	Mentor networks, mentoring, and impacts on diversity in STEM	Hernandez et al. 2020 <i>Optional: Glessmer et al. 2015</i>	Recruit a new mentor OR thank a current mentor
9:	Privilege	McIntosh 1989	
10:	DEI & Job Search Panel; Diversity statements, diversity conversation in interviews (academic and non-academic)	Beck 2018	Draft diversity statements or interview answers
11:	Land acknowledgments (Guest); Practice land acknowledgements		Draft land acknowledgments
12:	Peer review workshop		
13:	Student choice	Student choice	Lead discussions teams of 3
14:	Student choice	Student choice	Lead discussions teams of 3
15:	In-class research presentation and celebration		Pop-up slides

Schedule for 3<sup>rd</sup> credit hour meeting Thursdays 1:55-2:05pm (subject to changes):

Week	Topic	Assignment (due by 1pm)
1:	Why are we here? Intro (share past research projects from this course and outside of this class)	
2:	Brainstorming research questions	
3:	Share and discuss research questions, form teams (2-3 students each)	Three research questions
4:	Designing the research project	Annotated bibliography (min. 3 references)
5:	Research and ethics working with human subjects	Outline research products (min. 2)
6:	What is IRB? Why might I need IRB approval?	
7:	Designing a survey, part 1	Research product 1
8:	Designing a survey, part 2	Revision of research product 1
9:	Analyzing data: statistics overview	Research product 2
10:	Putting it all together	Revision of research product 2
11:	Writing a research abstract	
12:	Draft abstract review	Draft abstract
13:	Putting together a pop-up talk	Revised abstract
14:	Draft pop-up slide review	Pop-up slide draft

15:	Celebration (after presentation in class)	Final abstract and pop-up slide due
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**Statement on academic misconduct:** It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

**Statement on disability services:** The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let us know immediately so that we can privately discuss options. To establish reasonable accommodations, we may request that you register with Student Life Disability Services. After registration, make arrangements with us as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: [slds@osu.edu](mailto:slds@osu.edu); 614-292-3307; [slds.osu.edu](http://slds.osu.edu); 098 Baker Hall, 113 W. 12<sup>th</sup> Avenue.

**Statement on mental health:** As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student’s ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life’s Counseling and Consultation Service (CCS) by visiting [ccs.osu.edu](http://ccs.osu.edu) or calling [614--292--5766](tel:614-292-5766). CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at [614--292--5766](tel:614-292-5766) and 24 hour emergency help is also available through the 24/7 National Suicide Prevention Hotline at 1--800--273-TALK or at [suicidepreventionlifeline.org](http://suicidepreventionlifeline.org).

**Statement on sexual misconduct/relationship violence:** Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator at [titleix@osu.edu](mailto:titleix@osu.edu)

**Statement on diversity, equity, and inclusion:** The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. **We are committed to maintaining a community that recognizes and values the**

**inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential.** Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

As your instructors, we aim to create a safe space where we can grapple together with challenging issues involving unconscious bias. In keeping with the University's statement on diversity, all participants are expected to respect and encourage one another in open, honest dialogue that is sensitive and free of judgment. All conversations will be considered confidential. Acts of discrimination, prejudice, and racism will not be tolerated. If you see or hear something that concerns you, please feel encouraged to confront it in the moment. One productive model for doing so is the following: "I felt \_\_\_\_\_ when you \_\_\_\_\_ because \_\_\_\_\_. Instead (or in the future), I ask that you \_\_\_\_\_ because \_\_\_\_\_."

**Statement on religious holidays:** The University recognizes/observes holidays as listed on <http://controller.osu.edu/pay/pay-holidays.shtm> If you observe any other religious holidays, please make special arrangements in person with the instructor within the first two weeks of class.