

ATS680A3: Social Responsibility in Atmospheric Science

Course Syllabus

Fall 2021 (2 credit hours)

Co-Instructors

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Class Meetings

Day/Time: Wednesdays, 12:00-1:50 PM

Location: Atmospheric Science West 121

Office Hours: TBD

Prerequisites:

There are no prerequisites.

Course Overview:

This course will provide the structure and resources to help prepare students to address issues of participation, representation, equity, and inclusion challenges that are unique to the field of atmospheric science. Students will engage with a diversity of scholarship to develop a robust understanding of foundational concepts and practices for personal and social change and to incorporate and disseminate these concepts through their science.

The geosciences have the lowest racial and ethnic diversity of all the STEM fields at all levels of higher education, and atmospheric science is emblematic of this discrepancy. This course will help atmospheric science graduate students begin their journey toward being a “diversity champion” and a more socially responsible scientist. This course will provide students an opportunity to expand their personal and professional growth through readings, video lectures, guest speakers and other activities to gain a critical understanding of intersectionality, gender, social identity, systems of oppression, and historical perspectives on social change movements.

Course learning objectives

Upon completion of this class students will:

- Identify how social identity shapes scientific thought and practice;
- Evaluate and explain the impacts (positive and negative) of science and technology on marginalized and minoritized groups;
- Identify and respond to manifestations of implicit and explicit bias in atmospheric science/STEM;
- Recognize social justice issues in the atmospheric science community, and be able to design and implement interventions to affect change;

- Act as advocates and allies for people with different life-experiences than their own

Course Structure and Content

The course will be discussion based and benefit from participation by all. We will couple our discussions with guest speakers. All weekly readings for the class will be posted on Canvas.

Grading

Grades are based on attendance and participation in class discussion, homework assignments and term projects. Based on course content and discussions, students will work in small teams to develop a community action service-learning project. Grades are weighted as follows: homework assignments: 20%, in-class discussion: 60%, term project: 20%.

Weekly Schedule for Fall 2021

Week	Topic	Activities/ Guest Speakers	Readings (Provisional)
1 : August 25	Introductions, Motivation, Class Engagement	Exercise: What is the environment we want? ImprovScience®	
2: September 1	The Big Picture: Why do we need this class? Social Identity	Social Identity Wheel	Powell (2018): “The Power of Diversity” Bernard and Cooperdock (2018)

3: September 8	Bias in STEM	Kirwan Institute for Implicit Bias Project Implicit	<p>Dutt et al., 2016: "Gender differences in recommendation letters for postdoctoral fellowships in geoscience"</p> <p>Devine et al., 2012: "Long-term reduction in implicit bias"</p> <p>Moss-Racusin et al., 2012: "Science faculty's subtle gender biases favor male students"</p>
4: September 15	Gender and racial equity, part 1	Guest Lecture: Prof. Lynn Hempel (Critical Race Theory)	<p>Nielsen et al., 2017: "Gender diversity leads to better science"</p> <p>Nishii 2013: "The benefit of climate for inclusion for gender-diverse groups"</p>
5: September 22	Gender and racial equity, part 2 Discussion of Course Project		<p>Sherbin and Rashid 2017: "Diversity doesn't stick without inclusion"</p> <p>Tanner 2013, "Structure Matters: 21 Strategies"</p> <p>Overcoming Implicit Bias and Racial Anxiety"</p>

6: September 29	Gender and Sexual Harassment in the Geosciences		NAS (2018) ADVANCEGeoPartnership Ford et al., 2018: "Gender inequity in speaking opportunities at the American Geophysical Union Fall Meeting"
7: October 6	Gender and Sexual Harassment: Tools and Bystander Intervention	AdvanceGEO Training	Clancy et al 2015: "Survey of academic field experiences (SAFE): Trainees report harassment and assault." Fischer et al. (in review)
8: October 13	Cultural Diversity: A global perspective		Writing Support for International Graduate Students: Enhancing Transition and Success
9: October 20	Inclusion and Belonging	Prof. Nicole Kelp (Science Communication and Social Justice)	Sherbin and Rashid 2017: "Diversity doesn't stick without inclusion"
10: October 27	Access and Physical Diversity		Trujillo and Tanner 2014: "Considering the role of affect in learning" Harrison and Tanner 2018: "Language matters: considering microaggressions"

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11: November 3	Stereotype threat and imposter syndrome		Steele and Aronson (1995) Whistling Vivaldi and Beating Stereotypes Ben-Zeev et al. (2017)
12: November 10	Inclusive practices: atmospheric science education and research		Wolfe and Riggs (2018) Callahan et al. (2018) Maas et al. (2020)
13: November 17	Benefits and examples of inclusive micro-practices		
November 22-26, Fall Break - No Class			
14: December 1	Community action service learning project		
15: December 8	Community action service learning project		
16: December 13-17	Finals Week: Project presentations will be scheduled based on the finals week schedule		

Statement on Academic Integrity

The course will adhere to the CSU Academic Integrity Policy as found in the General Catalog and the Student Conduct Code. At a minimum violations will result in a grading penalty in this course and a report to the Office of Conflict Resolution and Student Conduct services.

COVID-19

Important information for students: All students are expected and required to report any COVID-19 symptoms to the university immediately, as well as exposures or positive tests from a non-CSU testing location.

If you suspect you have symptoms, or if you know you have been exposed to a positive person or have tested positive for COVID, you are required to fill out the COVID Reporter (<https://covid.colostate.edu/reporter/>). If you know or believe you have been exposed, including living with someone known to be COVID positive, or are symptomatic, it is important for the health of yourself and others that you complete the online COVID Reporter. Do not ask your instructor to report for you. If you do not have internet access to fill out the online COVID-19 Reporter, please call (970) 491-4600. You may also report concerns in your academic or living spaces regarding COVID exposures through the COVID Reporter. You will not be penalized in any way for reporting. When you complete the COVID Reporter for any reason, the CSU Public Health office is notified. Once notified, that office will contact you and, depending upon each situation, will conduct contact tracing, initiate any necessary public health requirements and notify you if you need to take any steps.

For the latest information about the University's COVID resources and information, please visit the **CSU COVID-19 site:** <https://covid.colostate.edu/>.