

Human Health and the Climate Crisis

A semester-long course for undergraduates, graduate students, and students studying health professions that explores how climate change is affecting our health and well-being

INTRODUCTION

From record-setting heat and destructive wildfires to intensifying hurricanes and sea level rise, climate change is impacting human health and well-being in many ways. As climate change accelerates and becomes more visible in our lives, it is critical that we understand the ways that we are impacted today and in the future, which populations are at particular risk, and which actions will have the greatest impact to reduce adverse health effects and promote well-being. Climate change is a health threat magnifier that will continue to worsen the burdens of ill-health around the world, particularly among populations in vulnerable regions that have low adaptive capacity. This crisis also presents us with the opportunity to make urgent improvements to both our climate and health systems, which are mutually beneficial.

Students will begin by exploring basic concepts and trends in climate science, policy, and activism, an overview of public health, epidemiology and sources of health information, and climate justice principles and examples. They will then learn about specific ways that climate change impacts human health and well-being, particularly for highly at-risk populations: heat-related illnesses, health impacts of extreme weather, respiratory and vector-borne diseases, water- and foodborne illnesses, malnutrition, mental health conditions, and the health impacts of human displacement. They will also explore intersections between climate change and health professions, including clinicians' perceptions about climate change effects on their patients, roles and responsibilities of health professionals to communicate and advocate for climate action, and the ways that the healthcare sector contributes to the climate crisis.

REQUIRED TEXT

Carlson, Gail. 2022. *Human Health and the Climate Crisis*. Jones & Bartlett Learning. ### pp.

SUGGESTED ADDITIONAL READINGS

Ward, Jesmyn. 2011. *Salvage the Bones*. New York: Bloomsbury USA. 271 pp.

This is a fictional account of a poor Black family living in a small Gulf Coast town in Mississippi in the days before, during and immediately after Hurricane Katrina directly hit the region in 2005. Beautifully written, this story provides an eye-opening glimpse of the experiences of people of color living in disaster-prone areas who have little capacity to protect themselves, no access to formal social safety nets or emergency preparedness services, yet fierce strength to endure.

Selected essays and poems from Johnson and Wilkinson, Eds. 2020. *All We Can Save: Truth, Courage, and Solutions for the Climate Crisis*. New York: One World. 418 pp.

This rich anthology amplifies the voices of a diverse group of women that often go unheard in the climate crisis, including Indigenous women, women of color and teen activists.

ADDITIONAL RESOURCES

Lancet Countdown: Tracking Progress on Health and Climate Change. 2020 Report.
<https://www.lancetcountdown.org/2020-report/>

Sample course syllabus – Human Health and the Climate Crisis

Intergovernmental Panel on Climate Change (IPCC). Forthcoming in 2022. *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Sixth Assessment Report (AR6). <https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/>

IPCC. 2021. *Climate Change 2021: The Physical Science Basis*. Sixth Assessment Report (AR6). <https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/>

U.S. Global Change Research Program (USGCRP). 2016. *The Impacts of Climate Change On Human Health In The United States: A Scientific Assessment*. <https://health2016.globalchange.gov/>

Project Drawdown. “The World’s Leading Resource for Climate Solutions.” <https://drawdown.org/>

Global health and epidemiological data, including:

- World Health Organization (e.g., The Global Health Observatory, <https://www.who.int/data/gho>)
- Institute for Health Metrics and Evaluation (e.g., Data Visualizations, <http://www.healthdata.org/results/data-visualizations>)
- U.S. Centers for Disease Control and Prevention (e.g., Climate Effects of Health, <https://www.cdc.gov/climateandhealth/effects/default.htm>)

Human Health and the Climate Crisis SUGGESTED COURSE SCHEDULE		
Day †	Topic	Reading(s)
1	Introduction to climate change	Carlson Chapter 1
2	Black, Indigenous and youth voices on climate change (<i>suggested</i>)	Selected essays and poems in Johnson & Wilkinson (Eds.)
3	Measuring the health impacts of climate change	Carlson Chapter 2
4	Global and epidemiological data sources	Explore online health data from a variety of sources Read epidemiological studies (<i>suggested</i>)
5	Climate justice	Carlson Chapter 3
6	Health impacts of extreme heat	Carlson Chapter 4
7	Discussion of <i>Salvage the Bones</i> (<i>suggested</i>)	Ward pp. 1-82
8	<i>Salvage the Bones</i> (continued)	Ward pp. 83-176
9	<i>Salvage the Bones</i> (continued)	Ward pp. 177-258
10	Health impacts of extreme weather	Carlson Chapter 5
11	Health impacts of air pollution	Carlson Chapter 6
12	Vector-borne diseases	Carlson Chapter 7
13	Water-related health impacts of climate change	Carlson Chapter 8
14	Food-related health impacts of climate change	Carlson Chapter 9
15	Mental health impacts of climate change	Carlson Chapter 10
16	Human displacement caused by climate change	Carlson Chapter 11
17	Roles of health professions in the climate crisis	Carlson Chapter 12
Additional class sessions	Presentation of student research – case studies on the health impacts of climate change (<i>suggested</i>)	None

† Depending upon the length of each class session, each topic may be discussed on *two* consecutive days.