



THE UNIVERSITY OF ARIZONA

**Mel & Enid Zuckerman
College of Public Health**

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University of Arizona**

EHS 525 Global to Local: Environmental Change and Human Health

Catalog Description: How does a changing environment affect human health? What is the public health role in mitigating and addressing these implications? Students in this course will directly interact with these questions and explore the fundamentals of global environmental change with a focus on climate change. Students will develop a better understanding of the direct and indirect pathways through which climate and the environment influence human health; the mechanisms and strategies employed to manage and address these impacts; and the challenges and opportunities facing public health researchers and practitioners alike. (3 units)

Course Topics:

- Climate Change, Health and Resilience
- Environmental Drivers of Human Health
- Adaptation Planning
- Health Impacts and Vulnerable Populations
- Ecosystem, Animals, Vector-borne & Zoonotic Diseases
- Urban Planning and Extreme Heat
- Climate Change and COVID-19 Connections
- Agriculture, Food Security and Safety
- Mental Health Impacts of Climate Change
- Climate Change Communication
- Facilitating Behavioral Change in Climate Change

Course Objectives: During this course, students will:

- Describe the role of the public health enterprise in managing and addressing the health impacts of climate change.
- Determine how to weigh the evidence for impacts on a specific health outcome.
- Demonstrate knowledge of the health implications of climate change via group activities and projects.
- Compare and contrast the role of adaptation and mitigation actions and explain importance of developing programs and policies with co-benefits for public health.
- Understand the methods and tools utilized to quantify the health impacts of climate change and the associated exposure pathways.
- Demonstrate knowledge of the interconnectedness of environment and health.
- Illustrate understanding of the climate drivers of human health and the exposure pathways through which impacts occur.
- Describe the research needs and priorities for enhancing the public health response to climate change.
- Evaluate public health and policy responses.

Learning Outcomes (Competencies Obtained): Upon completion of this course students will be able to:

1. Assess population needs, assets and capacities that affect communities' health
2. Compare the organization, structure, and function of health care, public health, and regulatory systems across national and international settings
3. Select methods to evaluate public health programs

4. Propose strategies to identify stakeholder and build coalitions and partnerships for influencing public health outcomes
5. Evaluate policies for their impact on public health and health equity
6. Communicate audience-appropriate public health content both in writing and through oral presentation
7. Develop strategies to address One Health challenges by engaging researchers across multiple disciplines and stakeholders with diverse perspectives, motivations, and economic incentives
8. Identify ecosystem changes and impacts that affect human, animal and planetary health
9. Demonstrate an understanding of the complex relationships between climate change and health
10. Demonstrate competence in recognizing population-based hazards and designing and implementing public health interventions
11. Demonstrate familiarity with international and domestic policies relevant to climate change and health
12. Demonstrate competence on how to communicate health and climate information to different audiences