

Climate Change and Health

Course Syllabus

Semester-long Lecture Series (14 Weeks)

Language: English (*optional – can be tailored*)

Level: Graduate / Advanced undergraduate

Course Length: 1 semester (14 weeks)

Format: Weekly lectures (1x90 min or 2x45 min)

Course Description

This course explores the multidimensional relationship between climate change and human health. Students will examine how rising temperatures, changing ecosystems, and extreme weather events affect various physiological systems, disease patterns, and health care delivery. Emphasis is placed on evidence-based understanding and critical thinking around climate-related health risks and responses.

Learning Outcomes

By the end of this course, students will be able to:

- Identify and explain the physiological, mental and public health effects of climate change.
- Analyze the influence of climate change on various diseases and health conditions.
- Understand how vulnerable populations are disproportionately affected.
- Evaluate current and future challenges in clinical practice and health systems.
- Explore mitigation and adaptation strategies, including sustainable healthcare practices.

Weekly Topics

Week	Topic
1	Climate change and effects – general introduction
2	Thermoregulation, effects of heat, heatstroke
3	Impact of climate change on cardiovascular diseases (CVD)
4	Impact of climate change on metabolic disorders
5	Temperature effects on kidney function and renal diseases
6	Impact on pregnancy and reproductive health



Week	Topic
7	Mental health, occupational stress, and climate
8	Pharmacological aspects and medication in a changing climate
9	Vector-borne diseases and other infections
10	Waterborne diseases, toxic algae, balneology
11	Allergy, dermatological effects
12	Cancer, fungal diseases, mycotoxins
13	Wildfires, droughts, extreme weather events
14	Greening healthcare, adaptation, inequalities

Assessment (*optional – can be tailored*)

Class participation and discussions: 20%

Midterm quiz or case reflection: 30%

Final assignment/presentation: 50%

Literature

Find at the end of the learning materials.

