

GDB 106: Geographies of (One) Health

Spring 2022

M/W/F 11:00-11:50; 217 Art
Professor D. K. Davis, DVM, PhD



Planting rice illustrates the intense human/vector contact with certain forms of agriculture often leading to diseases - here with mosquitoes (malaria, dengue, etc) and aquatic snails (schistosomiasis).

Course Description:

States of health and disease are governed by much more than disease agents or genetic mutations. This course examines global health and disease problems from the inherently holistic and multidisciplinary approach of medical geography. It examines two crucial components of states of health and disease: 1) the physical environment and how it changes and 2) the human social, cultural, economic and political systems that drive many of the changes that impact health and disease. This course therefore provides an introduction to basic physical geography (including atmospheric and oceanic circulation, seasons and climate patterns, precipitation and drought patterns, surface waters, soils and vegetation, and ecological dynamics), in order to understand, for example, the basic ecology of disease vectors like mosquitoes and the environments in which they live, thrive, and spread disease. This course, equally importantly, analyzes human geography, that is, in the basic social, political and economic systems that have a significant impact on disease development, distribution, and virulence. It further examines some of the foundational structures that help to shape healthcare and its (unequal) distribution around the world. Topics covered include imperialism, neoliberalism and production systems, spill over/spill back, poverty and social justice, emerging diseases, globalization, agriculture and food production, and the digital revolution through which we are currently living. We add to this a solid overview of many of the most pressing diseases on the world stage today, from Zika and Rift Valley Fever to *Candida auris*, to gain a better and more comprehensive understanding of "One Health" that will empower students to engage in helping to build a more healthy and more sustainable world and improve planetary health.

Fulfills the GE Arts & Humanities, Social Sciences and World Cultures requirement.

Prerequisite: None, but Designed for Upper Division Students. This is a **10 day drop** class.

Representative Books (do NOT buy until after first class; all available through UCD Libraries):

- 1) Adams and Butterly (2015) *Diseases of Poverty: Epidemiology, Infectious Diseases, and Modern Plagues.*
- 2) Patel, R. (2012) *Stuffed and Starved: The Hidden Battle for the World Food System.*
- 3) Emch, M. E. Dowling Root, and M. Carrel (2017) *Health and Medical Geography*, 4th Ed.

Articles and book chapters will compliment the main texts and be available on canvas.

Basis of Grading: Students will be evaluated based on their performance on quizzes and exams (mid-term & final) and some written work. Other assignments may be added.

This Description is Subject to Change