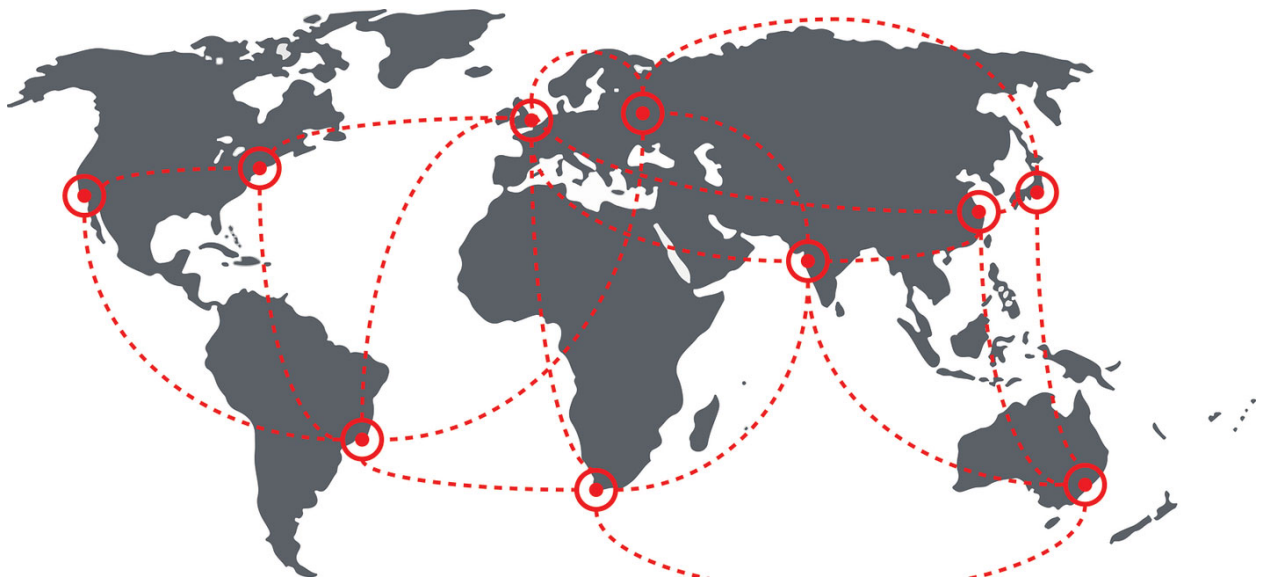


Current Topics in Public Health (S13748): Syllabus

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Introduction

Hello young scholars of public health! I'm Kenny, and thanks for showing interest in my class Current Topics in Public Health. The goal of the syllabus is to give you a fairly complete idea of what to expect from this class, and what kind of knowledge I recommend you have if you want to take the class.

First, I will add a little bit about myself. I'm a sophomore here at MIT studying math, focusing on probability and statistics. However, as you can probably tell from the subject of this class, I am very interested in the field of public health and have aspirations to become an epidemiologist¹ or some other public health professional. Don't worry too much about me being a math major — I might go on random tangents, but I promise I'll keep these to a minimum, as long as you promise not to ask any provocative questions (e.g., “What's the big deal about the Riemann hypothesis?”) To further convince you that I'm more of a biologist than a mathematician, I worked in two different biology labs over the past three years (so I can answer questions relating to lab work), and I even took organic chemistry.

Okay, so what's the deal with this class? The purpose is to give you, the student, an opportunity to take a brief look at a few hot issues in the field of public health right now. What is public health, you may ask? I'm not big on formal definitions, so I'll give you my own definition: it's the field of study that seeks to identify health issues and figure out how to keep people healthy, or make them healthy if they're sick. Ebola? Covered. The weird vaping illness that's been on the news recently? That's public health too. [Head injuries](#)? Yes, head injuries: public health experts look into that, too. And, of course, coronavirus.

For each week of the class, we'll focus on a different public health topic that's been making headlines recently. We'll read what experts have written about it and hear what they have to say. You may recall I used that cool word *epidemiology* earlier. Epidemiology is the particular branch of public health concerned with diseases. I'm a big fan of epidemiology, so if you do choose to take this class, you'll be hearing that word a lot. There have been a couple of outbreaks recently that you may or may not have been aware of, and we'll take a look at those.

¹Don't know what that is? Then take the class! Actually, just read a little further in the syllabus.

Prereqs and Class Outline

What You Should Know Already

Originally, I thought I would be tighter on the prerequisites for this class, but then I started thinking about what topics to actually cover, and it occurred to me that you don't need a substantial background to understand most of the material. Whatever you haven't learned in biology, I could cover in class. So, there are no requirements if you want to take the class. If you have taken a bio class, then that's fantastic — you can probably ask more advanced questions and maybe look into the subjects in greater depth. But my goal here is to provide an introduction, not an exhaustive description.

All you really need for this class is an interest in medicine or disease science. We won't be moving very fast through the material.

Topics

The following is a list of subjects that I think is broad enough to have something for everyone, and also covers a big chunk of the field of public health. HOWEVER, I am open to suggestions: if there's a subject in public health that interests you, then I might be able to find a way to include it in the course.

Week 1: Class Introduction and Overview of Public Health + Coronavirus. Our first meeting will be my attempt to describe to you what public health is, what public health specialists do, and how you can become one. Also, of course, I'll go over the syllabus with you and answer any questions you have about the class. I'll also set aside some time to talk about the coronavirus, because I'm sure many of you are interested in it.

Week 2: E-Cigarette and Vaping Associated Lung Illness (EVALI). Wow, what a mouthful. Well, EVALI is one of the more interesting diseases that has appeared this century, because currently no one knows why it happened. Suddenly, people who used vaping products became really sick.

Week 3: Eastern Equine Encephalitis (EEE). I'm from Connecticut, and after talking with my family in September, I realized how terrified people are of this mosquito-associated illness. But why has it been so limited? Is there a risk of it spreading more rapidly? I mean, if mosquitos are everywhere, shouldn't mosquito diseases be everywhere, too?

Week 4: Cold and Flu. There may be no other diseases that feature more prominently in the U.S. than the cold and flu. Virtually everyone you talk to has had it at some point, and everyone seems to keep getting it again and again every year. We'll also cover coronaviruses in a bit more depth this week.

Week 5: Nutrition. What's the deal with these diets? How do you know what food is good for you and what isn't? The answer is you don't know a lot of the time, but at least science has recently given us some insight into our foods.

Week 6: Mental Health. Somehow, even though most teenagers realize that mental health challenges pose one of the biggest threats to day-to-day life, not much seems to be happening in this area. What are experts saying about the mental health crisis? Wait — is it even a crisis to begin with? We will investigate the meaning of the word “crisis” in the public health context, since it seems like there are a lot of crises these days.

Grading

Woohoo, no grades! Sit back and enjoy the ride — we're here to learn interesting things.

There will be some readings, but they won't be more than a few pages per week, and I'll try to make them as interesting as possible.

Structure

This will be a kind of seminar class, so your participation (i.e. sharing your ideas in class) is encouraged. The main reason for this is simply that I don't want to bore you by speaking to you for the entire time. I'll show a couple videos here and there, and some cool graphs and diagrams and all that, but we will be covering some intricate topics, so your questions and comments are appreciated.