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EHD 573 Epidemic Extra Credit Videos & Cover Email

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Robin Delcourt <umprovost@maine.edu>

Fwd: EHD 573 Epidemic Extra Credit :-)
1 message

Craig Mason <craig.mason@maine.edu>   Thu, Apr 23, 2020 at 9:50 AM
To: UMaine Provost <umprovost@maine.edu>

I am responding to the request for info on how faculty incorporated discussion of the pandemic into coursework. At the start of the crisis I made a few extra credit videos for my Intro to Education Stats course (see below) on some of the mathematical principles involved in understanding pandemics (I actually do a lot of work with the US Centers for Disease Control and Prevention -- although not in the communicable disease area).   If you look at one video, *the third on Herd Immunity is the best* :-)

Stay safe !

Craig

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---------- Forwarded message ---------
From: **Craig Mason** <craig.mason@maine.edu>
Date: Fri, Mar 20, 2020 at 2:26 PM
Subject: EHD 573 Epidemic Extra Credit :-)

In the spirit of the craziness we are facing with this pandemic, I made three short extra credit videos on epidemiology and epidemics :-)

The videos discuss some of the math behind three topics that are often part of COVID-19 news stories and discussions: exponential growth, social distancing, and herd immunity. The first video on exponential growth is very basic -- you're probably already familiar with the idea and maybe even the story I share. The topic of the second video (social distancing) is something in the news a lot, so you may also familiar with underlying principle. The third video addresses a term you may have heard in the media regarding COVID-19 and vaccines in general -- herd immunity. The video digs into the underlying basis for herd immunity and the math behind why it works on a deeper level than we typically see in the media.

The videos are pretty short -- the first two are just over 5 minutes each, the final one is a little over 12 minutes.

Here is a summary of each, and link to the corresponding video. **I've attached a copy of a 10 point EXTRA CREDIT assignment.** I'm sending it as a Word document, so you should be able to just type your answers directly into the document -- but you can print and scan a copy if you would prefer to send me a PDF version.

Some Fundamental Mathematical Principles of Epidemics: Part I (5:06)
This is the first of three short videos reviewing some of the mathematical concepts involved in how epidemics arise, and how we try to confront or prevent them. In this first video, we look at how exponential growth powers the birth and development of an epidemic.
https://youtu.be/Xmg5UXR_rn4

Some Fundamental Mathematical Principles of Epidemics: Part II (5:33)
This is the second of three short videos reviewing some of the mathematical concepts involved in how epidemics arise, and how we try to confront or prevent them. In this videos we briefly discuss the basis for social distancing and slowing the growth and spread of a contagion.
https://youtu.be/6erUZp4vtTc

Some Fundamental Mathematical Principles of Epidemics: Part III (12:23)
This is the third of three short videos reviewing some of the mathematical concepts involved in how epidemics arise, and how we try to confront or prevent them. In this final video, we discuss the mathematical basis behind herd immunity and the prevention of future epidemics and pandemics.
https://youtu.be/B0jtjvdGyXY

Hope you find them entertaining and informative :-)

Let me know if you have questions !

Craig

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