GSU Math & Statistics Club Presents:

Tuesday, November 6th @ 1:30 PM in COE 796

Mathematics and the Foundations of Public Health

By Dr. Howard Weiss
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ABSTRACT:

After some brief comments about the nature of mathematical modeling in biology and medicine, we will formulate and analyze the SIR disease transmission model. The model is a system of three non-linear differential equations that does not admit a formula solution. However, we can apply methods of dynamical systems to understand a great deal about the solutions. Along the way we will use this model to develop a theoretical foundation for public health policy, and we will observe how the model yields several fundamental insights (e.g., threshold for infection, herd immunity, etc.) that could not be obtained any other way. At the end of the talk we will compare the model predictions with actual infection data.

Come get some pizza! Yum!

Math & Statistics Club at
Georgia State University