

1116-T1-2177      **Meredith L. Greer\*** ([mgreer@bates.edu](mailto:mgreer@bates.edu)), Hathorn Hall, Bates College, Lewiston, ME 04240.  
*Estimating Parameters and Responding to Questions During an Outbreak: Modeling Ebola in Fall 2014.*

In fall 2014, students in a Mathematical Biology course mathematically modeled the ongoing outbreak of Ebola. Techniques used included SIR-style models,  $R_0$  computation using the Next Generation Method, and numerical simulation of model results. A particular difficulty, and therefore the source of many enlightening conversations, was the vagary of hoped-for model parameters while the outbreak was still occurring. Methods of modeling and finding parameter values form the first half of this talk.

Math Biology students also interacted with a Presidential Campaign Rhetoric course. Students in that course run a mock campaign, with two parties and a media presence. Their campaign featured an Ebola crisis (created for the course; not identical to the actual outbreak). To best confront the crisis, the political parties and media met with Math Biology students. Campaign Rhetoric students had to learn the underlying science and math of Ebola; Math Biology students had to explain their work in a way that interested non-experts could use in press releases. Assessment of this cross-course interaction showed unanimous excitement at the chance to use math modeling, actively, with students in a very different discipline. This connection of courses forms the second half of this talk. (Received September 22, 2015)