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Winthrop University

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Biology Class Studies Different Effects of Ebola Outbreak

Rock Hill, South Carolina - In what educators call a teachable moment, a Winthrop University biology class has used the fall semester to study the ripple effects caused by the Ebola virus.

The 2014 Ebola epidemic has been labeled the largest in history, affecting multiple countries in West Africa. Spread through direct contact with blood and body fluids of a person infected by and already showing symptoms of Ebola, the disease is not spread through the air, water, food or mosquitoes.

Since Ebola has reached the U.S., the Winthrop students have observed how rumors or inaccurate information spreads. “They have done a great job of approaching the issue like scientists,” Biology Professor Janice Chism said.

She required students to use a variety of scientific sources in their research but also asked them to look at non-science sources including websites where they found some great rumors. “They have really enjoyed critiquing the hysteria in some parts of the media,” Chism added.

According to the Center for Disease Control and Prevention, the risk of an Ebola outbreak affecting multiple people in the U.S. is very low.

Chism said the case study has been a great opportunity to help the 19 freshman honor students to see how seemingly unrelated areas of biology, such as ecology, animal behavior, viral evolution, cell physiology and function, are connected.

The students have studied topics including how the virus works, how the disease affects people, how it enters the human population, and the ecological, social and political effects. After conducting background research, each student is spending the end of this fall semester giving a short symposium presentation to the class about his/her chosen topic – much like at a scientific meeting.

Chism, who teaches the biology course with her colleague Laura Glasscock, said that dealing successfully with Ebola requires both a public health/medical approach and an understanding of the ways people’s behavior influences patterns of disease transmission. “For example, the cultural practices of people, such as funeral practices, have been a focus of concern because these are thought to have been very important in spreading the disease,” she said.

The class studied the social consequences coming from the epidemic and from the practices of health workers trying to stem it. Liberian schools were closed in many areas to prevent transmission but because the schools have been closed for months, many poor families may never send the children back, especially their daughters.
“This is even a bigger problem since Liberia only recently got its schools going again after a terrible civil war,” Chism said.

This is the first time Chism has used the Ebola virus as a focus of a case study for a class. “It has worked so well I plan to use the same case study model again but probably with a different disease,” she said.

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