# BIOL 199 Special Topics in Biology: Viruses and Public Health

**Class time:**

**Name of Faculty:** Anne Bost, Wabash College

**Course details:**

## Course Description

This non-lab course introduces pathogenic viruses in a global health context. We will use an evolutionary genetic lens to explore how different viruses copy themselves and express their genes. We also will consider how humans can solve modern virus-related public health crises through multidisciplinary approaches. From our beautiful Harlaxton campus we will visit Darwin’s home, chat in Watson and Crick’s favorite Cambridge pub, and interact with exhibits at London’s Science Museum and Natural History Museum. Come join us!

## Credit Hour Policy Statement

This class meets the federal credit hour policy of:

- This class meets the federal credit hour policy of 1 hour of class with an expected 2 hours of additional student work outside of class each week for approximately 15 weeks for each hour of credit, or a total of 45-75 total hours for each credit.

## General Education Objective

This course meets the General Education requirements for:

- None

## Learning Objectives

Listed below are the Learning Objectives for the course:

**Be able to explain:**

- what viruses are
- how nucleic acids impart phenotypes
- how DNA and RNA viruses vary in their replication strategies, and how these variations impact human disease
- how viruses evolve
- how vaccines and antiviral drugs work, and their benefits and limitations

**Be able to analyze:**

- multidisciplinary approaches to virus-related public health problems
- the relative impacts of culture, politics, and socioeconomic status on health in historic and modern viral disease case studies

## Assessment and Grading Criteria

The learning outcomes above will be assessed by:

- Exams
- Project written summary and oral presentation
- Journal