

## **Module: Analytical Methods for Infectious Diseases and One Health**

**Module coordinator: Helen Brown**

### **Module outline**

This module introduces the students to statistical and bioinformatics techniques that can be used for the analysis of modern real world data. The module will be taught by active researchers in the area, covering statistical methods, mathematical modelling, phylogenetics and epidemiology. Students will learn how to work with various types of data and make meaningful conclusions from analytical approaches. All topics will involve extensive hands-on experience and guided practice with biologically relevant datasets, and students will gain experience of using a variety of software packages.

### **Topics**

Statistical methods for the biosciences

Mathematical modelling

Phylogenetics and phylodynamics

Epidemiology

### **Learning : 5 ECTS**

Lectures: 25h

Practical exercises: 25h

Independent work: 50h

### **Assessment**

30% Presentations

70% Written assignment