

Teaching philosophy statement: Patrick Eichenberger

Over the past decade, I have taught a variety of courses that range from among the largest at NYU (*Principles of Biology*, ~500 students) to among the smallest (*Advanced Research in Microbiology*, 6 students). Some classes started at 8 am, some ran late in the evening when a student needed to complete a complex experimental procedure in the lab. Because of all these class formats, 'adaptability' is a term that can define my teaching – but I prefer to say, 'unflinching enthusiasm'. We owe it to our students to convey excitement about (micro)biology and to make it clear that we are here for them, regardless of their background. My ambition is always to pique their curiosity and help them acquire skills that go beyond the topic being taught, for instance how to efficiently prepare a presentation or read a scientific paper.

I am happy that my impact at NYU extends beyond the Biology Department. I enjoy teaching the lecture-based course *Microbiology and Microbial Genomics* and the graduate course *Hot Topics in Infectious Diseases*, both of which are popular among Global Public Health dual degree students, as well as two seminar courses for the Presidential Honors program (one for first-year students and one for third years). I have also been involved in the administrative aspects of undergraduate education as Chair of the UCC (2015-2017) and recently as Assistant Director of Undergraduate Studies for Biology, with a primary focus on the rapidly growing GPH/Biology dual degree.

I am particularly proud of the *Advanced Research in Microbiology* course that I developed just as the pandemic began to hit and ran since then. The principal objective of this class was to broaden students' access to cutting-edge laboratory research, and it has been extremely successful. *Advanced Research in Microbiology* represents a hybrid between a traditional laboratory course, where students follow well-established protocols and usually repeat experiments that have been conducted before, and an independent study, where individual students carry out a research project in an academic laboratory setting. At the beginning of the semester, students in the class pick a couple of understudied bacterial genes and conduct experiments to characterize the phenotype of the corresponding mutants. Furthermore, they regularly present articles and progress reports. Experience at the bench is invaluable for the training of Bio majors, but for a variety of reasons, including starting the major late, limited lab access during the pandemic, or necessity to hold another job, many were struggling to secure a research opportunity. Eleven students stayed in my lab after completing the course to accomplish an independent study, four completed a senior Honors thesis, and one has co-authorship on an upcoming publication. This also opened doors beyond my laboratory, as at least six students obtained laboratory technician positions and two joined PhD programs. The course now runs every semester, including a summer session adapted for the MS program. This class has really made a difference by exposing more students to the satisfaction of conducting experimental research.