

# MSIS-Kondrashov: Effect of alternative assessment modalities on student satisfaction and learning in quantitative biology

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Teaching quantitative skills for biology majors presents a set of challenges, in particular related to the perceived relevance of the material to their own educational goals, as well as the confidence of students in their own efficacy in learning these skills. The course Introduction to Quantitative Modeling for Biology is integrated into the biological sciences curriculum at University of Chicago and serves around two hundred students every year. Over the past three years, the pandemic disruption has prompted changes both in mode of delivery and course assessments, as the course moved to remote learning for two years and then back to in-person instruction in spring of 2022. In particular, I abolished all timed exams, allowed students opportunities to revise and resubmit assignments, and introduced open-ended projects involving data analysis or modeling in lieu of final exams. I will report the results of pre- and post-course surveys of student perceptions and satisfaction of the course, as well as measures of their performance and learning. My preliminary conclusions from this experience are that replacing timed exams with revisable assignments and projects a) does not seem to have a negative impact on student learning; b) increases student satisfaction; c) seems to increase the relative performance of women vs men.