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**Jeremy Orloff\*** (jorloff@mit.edu) and **Jonathan Bloom** (jbloom@math.mit.edu). *MIT's new introductory course: from probability to frequentist statistics through Bayesian inference*. Preliminary report.

Over the last three years at MIT we have completely redeveloped the syllabus and pedagogy of our introductory probability and statistics class. This talk will focus on the new syllabus, which we revised with several goals in mind. First, we wanted to unify the course by building a much stronger connection between the probability and statistics portions. Second, we wanted students to come away with a deeper understanding of the meaning of (classical) frequentist statistics, the focus of the traditional course. Third, we wanted to introduce students to Bayesian and computational statistics, central tools in modern data analysis.

Our syllabus makes the learning of Bayesian and frequentist statistics mutually reinforcing. We emphasize that both schools are responses to the lack of an objective prior in Bayes theorem. This view allows students to transition smoothly from purely deductive probability to statistical inference, understood as an art involving practical compromises. Furthermore, students intuitively assign a Bayesian interpretation to frequentist constructs such as p-values and confidence intervals. Through early exposure to Bayesian inference, students are inoculated against such misinterpretations. (Received September 16, 2014)