

1116-K1-2538 **Sarah Iams*** (siams@seas.harvard.edu) and **Margo Levine** (mlevine@seas.harvard.edu).
Offering individualized modeling experiences at a large university. Preliminary report.

Applied Math is the sixth largest undergraduate program at Harvard with approximately ninety majors per year, (36% women), serving students with application interests ranging across the physical and social sciences. Students study a range of mathematics, build foundational knowledge in statistics and computer programming, as well as three other mathematical areas, and gain a quantitative introduction to a field of application, such as economics, linguistics, physics, government, music, or environmental science.

Modeling is an important skill for applied mathematicians, and we require a substantive mathematical modeling experience, either via coursework or a senior thesis, to earn Honors in the major. We teach two modeling courses, one at the introductory level (with no calculus prerequisite) to introduce students to a range of application areas. The other course, which about half of majors take, is at the junior/senior level, and involves group and individual modeling projects. In addition, about 20 - 25% of our students write a senior thesis, which is a year-long modeling project where they attempt to develop and analyze a new model in their area of interest. We will highlight the benefits and challenges in offering these modeling experiences to our students. (Received September 22, 2015)