

1077-E5-2338

**Todd Swanson\*** (swansont@hope.edu), Hope College Mathematics Dept., 27 Graves Place, Holland, MI 49422-9000, and **Jill VanderStoep** (vanderstoepj@hope.edu), Hope College Mathematics Dept., 27 Graves Place, Holland, MI 49422-9000. *Introducing Statistical Inference using Randomization Methods*. Preliminary report.

For the past two and a half years, we have been using randomization based methods to introduce statistical inference. We have discarded topics from our traditional course and have reordered the remaining topics a number of times. Using randomization methods allows us to use the intuition students bring to class to introduce inferential statistics. This means from the first day of the course students begin to understand the structure of a test of significance, what a sampling distribution is, and what a p-value means. This early introduction to statistical inference allows us to build on this knowledge for the whole semester. Our students now develop a deeper understanding of the entire statistical process. We have also moved from a mainly lecture based class to one that is driven by group work, self-discovery, active-learning and tactile demonstrations using case studies, projects, and research articles. Our paper will include an overview of our curriculum, changes we have made to it along the way, an example we use in class, a class activity, and some assessment results. (Received September 22, 2011)