1077-E5-2100 **Jennifer L. Green*** (jgreen11@unl.edu) and **Erin E. Blankenship** (eblankenship2@unl.edu). *Cutting Through the Theory: Emphasizing Statistical Thinking in Mathematical Statistics.*

The two-semester calculus-based undergraduate mathematical statistics sequence is typically a traditional, lecture-heavy course. Students leave the sequence with a set of skills that revolve around mathematics, but with little understanding about how the theoretical concepts they have learned connect to real statistical practice. At the University of Nebraska-Lincoln, we recently revised a long-standing undergraduate math stat sequence to focus more on conceptual understanding while still including the theoretical content of probability and inference students need to be successful in subsequent statistics or actuarial science courses. Through the use of non-traditional classroom activities, as well as newly developed assignments, we were able to promote student understanding and problem solving, as opposed to mere memorization and calculation. These non-traditional materials, in conjunction with more traditional assessments, allowed us to gain a more holistic picture of student understanding. In this presentation, we will provide examples of the activities and assignments used in two different iterations of the undergraduate math stat sequence, as well as discuss our personal experiences with their implementation. (Received September 21, 2011)