

1086-N5-1280

Maria Shea Terrell* (mst1@cornell.edu), Mathematics Department, Malott Hall, Cornell University, Ithaca, NY 14853, and **Lisa Schneider-Bentley**. *Applications and Confidence Inventories for Assessing Curricular Change in Introductory Engineering Mathematics Instruction.*

This paper reports on a project that grew from a collaborative effort by Engineering and Mathematics faculty at Cornell University to enhance engineering students' abilities to transfer and apply their knowledge of mathematics to solve problems in engineering contexts. It includes a summary of work to date to develop two instruments: one to assess first year engineering students' ability to apply mathematics they know, the Mathematics Applications Inventory (MAI), and the other to assess students' attitudes and self-efficacy regarding their ability to apply mathematics, the Engineering and Mathematics Perceptions Survey (EMPS). The paper will share what we found when we used the instruments to assess changes in student learning over the course of a semester in which collaborative, applied, problem-solving workshops were integrated into Cornell's first semester engineering mathematics course. (Received September 21, 2012)