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William O Martin* (william.martin@ndsu.edu), NDSU School of Education, Dept 2625, PO Box 6050, Fargo, ND 58108-6050. *Assessing undergraduate student comprehension of mathematical proofs*. Preliminary report.

We describe a project designed to improve undergraduate student reasoning and comprehension of mathematical proofs, a central component of all mathematics programs. We draw on mathematics education research to collaborate with research mathematicians who teach upper level proof based courses. Our strategy is to initiate change in the teaching and learning of proof by working with mathematics faculty to learn about, understand, develop and implement research-based assessments of proof. We propose a cyclic, iterative assessment model to provide detailed information about undergraduates' abilities to read, interpret, critique and write proofs. Information gained from this proof assessment model will be used to collaboratively develop, implement and revise pedagogy and curricula. The proposed iterative assessment cycle will provide formative and summative evidence of the impact of these course changes on student learning. (Received February 23, 2016)