

1086-P1-2314

**Bernard L Madison\*** (bmadison@uark.edu), SCEN 301, Mathematical Sciences, University of Arkansas, Fayetteville, AR 72701. *Reverse Engineering a Quantitative Reasoning Course.*

In the absence of generally accepted content standards and with little evidence on the learning for long-term retrieval and transfer, this is a report on one way to design or evaluate the design of a QR course. A QR course with college algebra as a prerequisite has been taught for 8 years and is being modified slightly to be offered as an alternative to college algebra. One modification is adding a significant formal writing component. As the modification occurs, the current course and the modified one is judged according to six sets of criteria: the six core competencies of the AAC&U QL rubric, the five mathematical competencies from Adding It Up, the eight CCSSM practice standards, the five elements of effective thinking of Burger and Starbird, the summary research findings on human cognition from How People Learn, and the ten principles gleaned from applying the science of learning to university teaching. (Received September 25, 2012)