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M. Pádraig McLoughlin* (mcloughl@kutztown.edu), 116C Lytle Hall, Department of Mathematics, Kutztown University of Pennsylvania, Kutztown, PA 19530. *Crossing the Bridge to Higher Mathematics: Using a Modified Moore Approach to Assist Students Transitioning to Higher Mathematics.*

The author of this paper submits that a mathematics student needs to learn to conjecture and prove or disprove said conjecture; so, the paper's thesis is learning requires doing; hence, this paper describes the use of a modified Moore method (MMM) in a Bridge course to teach students how to do, critique, or analyse proofs, counterexamples, examples, or counter-arguments. Furthermore, the author submits that set theory should be the core of the course with logic and predicate calculus as antecedents; number theory, cardinal and ordinal theory, or basic topology of \mathbb{R} as consequents. The first part of the paper submits both pedagogical and practical justification for use of the MMM. The second part describes what is effective, not useful, and why; explaining what practices were refined retained, modified, or deleted. In the third part course design is explained. The final part discusses the successes and lack thereof of how the methods and materials in the course establish an atmosphere that creates for some students an easier transition to advanced work, assists in forging long-term undergraduate research, and encourages some faculty to direct undergraduates in math research. Qualitative and quantitative data are included to support what were or were not successes. (Received September 17, 2007)