

**Meeting:** 1003, Atlanta, Georgia, MAA CP Q1, MAA Session on Using Handheld Technology to Facilitate Student-Centered Teaching/Learning Activities at the Developmental Algebra Level

1003-Q1-946      **Robert Mann\*** (RR-Mann@wiu.edu), Morgan Hall 480, 1 University Circle, Macomb, IL 61455.  
*Focusing on Functions: Using activities, modeling, and graphing calculators to enhance Intermediate Algebra.* Preliminary report.

In the fall of 2000, the math department of Western Illinois University implemented a new "deficiency" course for its students to better prepare them for their college classes. This course was titled Core Competency in Mathematics and was designed as a transition between Intermediate Algebra and general education courses such as College Algebra. This course has focused on developing students' understanding of functions by exploring common functions using five representations: physical models, tables, graph, words, and equations. This exploration has been enhanced by hands-on activities that generate different function types and the use of graphing calculators to represent, analyze, and investigate these functions. Now in its fifth year, the Core Competency course has produced many positive results in terms of student success and learning. The emphasis on functions and modeling has allowed students who complete this course to attain better results not only in their later mathematics courses, but also in their subsequent general education science courses. This talk will focus on the structure of this innovative course and its impact upon student learning and achievement. The calculator-enhanced activities and the ongoing challenges of this course will also be discussed. (Received October 01, 2004)