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Bonnie S Saunders* (saunders@math.uic.edu). *Teaching Calculus with Future Middle School Teachers.*

The Department of Mathematics, Statistics, and Computer Science at the University of Illinois at Chicago has long offered a mathematics concentration with middle school endorsement for qualified elementary education majors. A sequence of three courses has been designed to give students the opportunity to study a mathematical subject at the college level (geometry, number theory and calculus, respectively), to explore appropriate uses of calculators and to practice methods of teaching as a major component of the course content.

The current curriculum for one of these course, Introduction to Calculus and the Graphing Calculator, centers on a collection of 150 questions that take the students on a journey through calculus while suggesting methods they can use to teach each other the subject. Student teaching activities include presentation of material, design of group activities, and assessment of both student and teacher performance. While answering these calculus questions, students come to see the many ways that middle school mathematics provides a foundation for further mathematical study. (Received September 26, 2006)