

**Kennesaw State University**

**Building Capacity in Cobb County for Fourth Year Mathematics Instruction**

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*Building Capacity in Cobb County for Fourth-Year Mathematics Instruction* is a newly proposed project, developed as a partnership with the Cobb County School District (CCSD, high need LEA), and Kennesaw State University's Bagwell College of Education and College of Science and Mathematics. The project will focus on increasing the number of mathematics teachers in the district who feel well prepared to teach Fourth-Year Mathematics courses, such as *Advanced Mathematical Decision Making*, *Mathematics of Industry and Government*, and *Statistical Reasoning*. The primary goal of this project is to strengthen teacher content knowledge and pedagogical content knowledge as it relates to the standards of the fourth-year mathematics courses. Teachers will enhance pedagogical strategies that support implementation of high cognitive demand tasks and student discourse. The objectives of the project are to deepen teachers' content knowledge, specifically related to: (a) discrete mathematics topics, (b) applied investments, (c) probability and expected value related to the stock market, retirement planning, and insurance and (d) statistical methods and mathematical modeling. An additional objective includes supporting teachers in developing curriculum materials for one of the three fourth-year courses AMDM, MIG, or SR. Teachers participating in the professional development will (a) have increased content knowledge of mathematics in the specified content areas, and be able to (b) develop materials for fourth-year math courses, and (c) implement a pedagogical strategy that supports student discourse. The summer session will take place over five days in 2017, with four additional sessions spread through the school year.

**Arts & Sciences Unit of Institute of Higher Education**  
Kennesaw State University—College of Science and Mathematics

**Unit of Institute of Higher Education that prepares teachers & principals**  
Kennesaw State University—Bagwell College of Education

**High Need LEA(s)**  
Cobb County