

Advanced Teacher Capacity Project

Preparing for the Ohio Core Curriculum in Mathematics (Four Years of High School Mathematics for All Students)

The Advanced Teacher Capacity project will develop content knowledge, pedagogical expertise, and skill in using technology in the areas of—

- Data Analysis, Probability, Statistics, and
- Modeling and Spatial Reasoning.

The project will include two professional development programs for high school mathematics teachers: Quantifying Uncertainty and Analyzing Numerical Trends (QUANT) and Modeling and Spatial Reasoning (MSR).

QUANT: Quantifying Uncertainty and Analyzing Numerical Trends will begin with a 2-week (60 contact hour) institute focusing on Data Analysis, Probability, and Statistics. Participants will explore these concepts in-depth using handheld computers and related software and other technology as tools for teaching and learning. Applicants will develop a plan to use what they learn in their classrooms, and as participants, will refine and carry out their plans. The QUANT Institute will take place at Ohio University, Chillicothe during summer 2010. (Additional QUANT institutes are being planned at Mount Vernon Nazarene University and John Carroll University.)

MSR: Modeling and Spatial Reasoning will begin with a 2-week (60 contact hour) institute will address Discrete and Continuous Modeling, as well as Geometric Modeling and Spatial Reasoning. Participants will explore these concepts in-depth using handheld computers and related software and other technology as tools for teaching and learning. Applicants will develop a plan to use what they learn in their classrooms, and as participants, will refine and carry out their plans. This institute will be offered at Ohio University in Athens during summer 2010.

The institutes will provide \$500 worth of materials, access to additional resources, plus food and stipends. Optional graduate credit will be available at a reduced tuition rate.

These institutes will help teachers become school and district leaders in the implementation of the new Ohio Core Curriculum. Each institute will be followed by on-line support and two 6-hour workshops to support classroom implementation of the ideas and methods learned during the corresponding summer institute. A teacher may attend one or both of these 72-contact-hour professional development programs.

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