Advanced Teacher Capacity

Ohio University Modspar
Modeling & Spatial Reasoning

Professional development for mathematics teachers

Modspar is a yearlong professional development program sponsored by Ohio University and offered at **Ohio University in Athens**. The program is for residential and commuter participants. If funded, Modspar begins with a 2-week summer institute, 8–19 July 2013, followed by online Webinars throughout the 2013–2014 school year and daylong workshops in October 2013 and March 2014 to support classroom implementation of the ideas and methods learned during the summer program.

Target audience: Mathematics teachers in Grades 9–12 who develop an implementation plan and have the support of their school principal. Teachers are encouraged to apply in pairs.

Participant benefits (free materials and more)

- Modspar instructional materials packet (binder of rich activities plus online materials).
- *Implementing Standards-Based Mathematics Instruction*, textbooks, and other resources.
- TI-*n*spire CAS teacher bundle: handheld unit and corresponding computer software.
- **Food and stipends**. Workshop lunches are provided. Stipends: $40/day ($400) for the summer institute. Substitute teacher pay for the follow-up workshops.
- **Optional graduate credit.** $600 for 4 graduate semester hours of credit ($150/str hr)[2]
- **Free room, breakfast, and dinner** for residential participants.

Content: Modspar explores discrete, continuous, and geometric modeling as well as spatial reasoning using handheld computers and other tools to support teaching and learning.

Topics: The nature of modeling, types of models, recursive relations, difference equations, multiple representations of functions, re-expression of data, three-dimensional geometry, spherical geometry, vertex-edge graphs, and fractals.

Objectives

- To give teachers activities and strategies for delivering Ohio's Academic Content Standards (OACS) and the Common Core State Standards.
- To develop the capacity to teach the modeling and spatial reasoning components of Ohio's new *Modeling and Quantitative Reasoning* course.
- To develop teachers' comfort level and facility in using the TI-*n*spire CAS, and interactive, dynamic geometry software.
- To help teachers develop lessons that meaningfully incorporate modeling and technology.

Registration fee: $100 (to be returned to participants in the form of stipends).

For questions and further information, contact **Mary Harmison** at **harmisom@ohio.edu**. To register, visit **www.cehs.ohio.edu/ATC.**

[1] The *Modspar program* is offered through Ohio University. It is supported by the *Advanced Teacher Capacity (ATC)* grant. Partners include Southern Local Schools in Perry County, the Athens–Meigs Educational Service Center, the South East Ohio Center for Excellence in Mathematics and Science (SEOCEMS), the Coalition of Rural and Appalachian Schools (CORAS), the Ohio University College of Arts and Sciences and Gladys W. and David H. Patton College of Education, the Departments of Mathematics and Teacher Education, and the Morton Professorship Endowment. The total estimated costs for the 2013–2014 ATC project are $320,689, which includes a $179,625 grant of federal funds from the Improving Teacher Quality Program administered by the Ohio Board of Regents, covering approximately 56% of the total costs.

[2] By accepting this reduced tuition from Ohio University, you are accepting a ***taxable scholarship.***