

Abstracts

A. Mini-grant Presentations

**1. "After One Year of IRT What Have We Learned and Done?"
Charles H. Atwood and Kimberly D. Schurmeier**

We have used Item Response Theory (IRT) to analyze the previous five years of test data from our CHEM 1211/1212 students. Based upon that analysis, we wrote our tests for academic year 2005-2006 and assessed student performance. Analysis of those results indicated that certain topics of the curriculum were particularly problematic for the students. In the academic year 2006-2007, we adjusted our teaching to specifically address those problematic topics. Data from each step of this process will be presented along with plans for future research into our students' learning processes.

**2. "Grasping Physics: Studio or Traditional?"
Donna Mullenax**

Physics usually has one of the worst retention rates on any campus. A blended approach, studio-method physics, has been one strategy used to address the retention rates in physics courses while maintaining the rigor of physics. Studio physics courses combine lecture and lab while using a variety of manipulatives to enhance the learning. The results from the PRISM-funded research will be provided as well as current work.

**3. "From the Outside In: Georgia Southern Botanical Garden's
Teacher Training"
Carolyn Altman**

The Georgia Southern Botanical Garden has used two mini-grants to develop comprehensive programs integrating hands-on learning in the classroom with the outdoors, helping teachers meet GPS in inquiry-based, project-oriented ways. Through ASTERS (Adventures in Science through Teaching, Exploration, and Resourceful Stewardship) K-7 teachers receive content training in biology and ecology, extensive curriculum specific to each grade level, the materials and supplies necessary to teach the hands-on units, and garden field trips. Through the Outdoor Learning Lab project, teachers will receive practical help constructing innovative, sustainable, and regionally relevant outdoor learning environments at their own schools, and will learn to apply the ASTERS and other curricula, empowering them to approach outdoor learning in creative, interdisciplinary ways. This talk will focus on the Garden's deliverables, successes and challenges, and our impact on our region's schools.

**4. "Redesign of College Algebra and Precalculus: An Analysis of Results"
Nikita Paterson, Valerie Miller, Margo Alexander, Brad McPhail**

The team will report on the design and test instruments to determine how the model affects how students learn. We will compare the students' performance on tasks in the classroom and in The MILE as well as overall performance versus historical performance.

**5. “Mathematics Mini-Grant Projects at Georgia Southern University - a True K-16 Partnership”
Fred Rich (EC)**

Drs. Susie Lanier, Goran Lesaja, Sharon Taylor, and Donna Saye of the Dept. of Mathematical Sciences, and Dr. Dana Sparkman of the Dept. of Teaching and Learning have worked successfully with students and teachers from a number of grade levels in Bulloch County. Dr. Lanier, for example, held a 4-day summer retreat with her 6th grade teachers, with meetings at the end of each 9-week period. Because of the success of this effort and other service Susie has offered, Dr. Lanier was awarded the Georgia Council of Teachers of Mathematics John Neff Award. Dr. Goran Lesaja, and his K-12 partner Paige Sutcliff (Statesboro High School) have worked toward developing math teams. Dr. Lesaja is particularly interested in developing students' abilities to compete successfully in math tournaments, and he visits schools in the Statesboro area to help recruit and educate students not only in mathematical concepts, but in how to think quickly, clearly and effectively in a competitive atmosphere. All Georgia Southern faculty involved in these mini-grants have established sustained contact with their K-12 partners, including the development of a county-wide 6th grade math Learning Community.

B. Grant Opportunities

**6. “Georgia's Teacher Quality Program: Partnerships to Enhance Pre-College Teaching and Learning”
Thomas Koballa**

Georgia's Teacher Quality Higher Education Program is managed by the University of Georgia for the Board of Regents of the University System of Georgia. Funding to support the program comes to the Board of Regents from the United States Department of Education as part of the No Child Left Behind Act signed by President George W. Bush and later identified as Title II, Part A, of Public Law 107-110. Georgia's Teacher Quality Higher Education Program funds are used to enhance the teaching of science, mathematics, language arts, reading, and social studies at the elementary, middle, and high school levels in public and private schools. For more information about Georgia's Teacher Quality Higher Education Program see the Georgia's Teacher Quality Program web site: <http://www.coe.uga.edu/teacherquality>.

C. Strategy 10

**“Developing a Reward Structure for Higher Education
Faculty Involvement in K-16 Schools”
Chuck Kutal, Sabrina Hessinger, Dick Miller, Fred Rich**

This presentation will review the work of the PRISM Strategy 10 committee, which was charged with developing a reward structure that would enhance and sustain the participation of higher education faculty in K-16 activities. After a brief discussion of the process employed by the committee, the newly adopted Board of Regents Policy for Work in the Schools will be introduced. A representative from each of the four PRISM regions will discuss plans for implementing this policy at the institutional level and the prospects for long-term sustainability. Comments and suggestions will be solicited from the audience.