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STEM II Initiative at Georgia College

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Georgia College

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STEM II Initiative @ Georgia College

Rosalie A. Richards, Ph.D.

Abstract

At Georgia College & State University, implementation of the USG STEM Initiative is flourishing and multi-faceted. Our initiative has not only made a positive impact on student performance and retention but also has helped create an environment that fosters local and institutional recognition of STEM-related work. This positive environment increases faculty satisfaction and productivity, and this overall is good for retention of faculty. *Supported by USG Presidential STEM Initiative*

Georgia College STEM Initiative

- state's Public Liberal Arts University
- three locations: Milledgeville, Macon, Warner Robins
- over 6,000 students
- ~ 5,000 undergraduates

Faculty Lines
STEM Mini-Grants Program
Service-Learning: Project FOCUS
STEM Retention Initiative

Faculty Lines

Three faculty lines in mathematics, middle grades education, and physics.

FY07 → FY11

24% increase in STEM/STEM Ed majors
81% increase in STEM degrees conferred
11% increase in STEM Ed degrees

Mini-Grant Program

- to stimulate innovative projects that improve STEM instruction and student learning
- \$7,000 grants
- 57 projects funded since 2008
- annual STEM Symposium

**DWF rates
decreased from
27% to 20% across
all STEM courses**



Victoria Deneroff: *Bridging Theory-Practice Gaps in STEM Teacher Preparation*





Amanda Chase and Samuel Mutiti: *Isolating, Identifying and Characterizing Bacteriophages*

STEM Symposium



Upcoming: 4th annual Symposium - March 14, 2012

- STEM/STEM education courses revised
- novel instructional materials developed
- presentations, publications, external funding  
- over 3,000 participants impacted
- empowering and valuing faculty, staff, and students
- recognition of STEM-related work

Service Learning: Project FOCUS



Project FOCUS provides service learning experience for STEM and STEM education majors in area schools; work with host teachers to develop learning experiences for K12 students

BENEFITS → inquiry-based, hands-on STEM instruction; learning about schools and community; interest in teaching as a career; service to the community; goodwill in the community



STEM Retention Initiative

Supplemental Instructors
are advanced undergraduates in targeted STEM courses to provide academic support.

FY12

- ✓ new faculty SI coordinator
- ✓ SIs in 55 sections of introductory STEM courses
- ✓ data collection on effectiveness



SI Training Session