

Project Report

Cover

[Redacted content]

Submitting Official (if other than PD\PI):

[Redacted content]

Accomplishments

**\* What are the major goals of the project?**

- Establish a supportive mentoring program between M.S. in Applied Mathematics students and undergraduates through cohort activities
- Increase recruitment of students attending the M.S program in Applied Mathematics at IUP through efforts focused on the Pennsylvania State System of Higher Education and regional colleges
- Expand recruitment of STEM undergraduates from regional community colleges
- Increase retention of undergraduate students majoring in mathematical areas at IUP
- Increase numbers of science undergraduate students with a mathematics minor and who take advanced applied mathematics

[Redacted content]

Crystallography at the annual Pittsburgh Diffraction Conference, held at the Stanford Linear Accelerator National Laboratory in Menlo Park, California. SaraJane Parsons's work was featured on the front page of the June 2012 SIAM News.

Key outcomes or Other achievements: From the Spring 2012 semester evaluation, 28 out of 30 program students responded:

- 100% indicated participation in the group increases their ability to network with students and faculty;
- 86% indicated the monthly meetings improved their commitment to continue their academic programs;
- 82% indicated the monthly meetings improve their motivation to work hard and succeed in classes;

From the Fall 2012 semester evaluation, 25 out of 29 program students responded:

- 96% indicated participation in the group increase their feelings of connection with other mathematics and science students and their ability to network with other students.
- 92% indicate participation in the group increase their ability to network with more faculty.

1. PASSHEMA 2013, "From assessment to a mathematics focus NSF S-STEM program"

2. IMM 2013, "Mentoring Mathematics and Science Majors in Applying Mathematics"

**Products**

**Journals**

**Books**

**Book Chapters**

**Thesis/Dissertations**

**Conference Papers and Presentations**

Yu, Li, Kip and Rick Adkins (2012). From assessment to a mathematics focus NSF S-STEM program. The Department of

**Other Publications**

**Technologies or Techniques**

Nothing to report.

**Patents**

Nothing to report.

**Inventions**

Nothing to report.

**Licenses**

Nothing to report.

**Websites**

Title: Scholarship for Creating Opportunities for Applying Mathematics

Description: This website provides information about the scholarship including application forms, deadline, and event schedules. The annual report and survey results are also posted.

**Other Products**

Nothing to report.

**What individuals have worked on the project?**

<b>Name</b>	<b>Most Senior Project Role</b>	<b>Months Person Month Worked</b>
Frederick A Adkins	Co PD/PI	2
Joe Shyrock	Technician	0
Alisa DeStefano	Other	0
Mike Husenits	Other	0
Alarcon Francisco	Other	0
Kimberly Burch	Other	0
John Lattanzio	Other	0
Dan Radelet	Other	0
Christoph Maier	Other	0
Mark Anthony	Other	0
Nathan Ritchey	Other	0
Frank DeStefano	Other	0
Edward Donley	Other	0
John Crispell	Other	0
Deanne Snavely	Other	0
Gary Stoudt	Other	0
Greg Wisloski	Other	0
Yu-Ju Kuo	PD/PI	2

**What other organizations have been involved as partners?**

<b>Name</b>	<b>Location</b>
INFORMS	Hanover, MD
Mentoret.Net	California

[REDACTED]

**Have other collaborators or contacts been involved? Y**

**What is the impact on the development of the principal discipline(s) of the project?**

In May 2012, the Mathematics Department had the largest group of graduates in the department over the last 20 years. Even though many factors contribute to this result, the S-COAM program has clearly increased the number of students in various mathematics courses, including filling sections of Introduction to Ordinary Differential Equations. Comparing 2009-2010 with 2011-2012, mathematics majors increased by 17%. Comparing 2009-2010 with 2012-2013 the number of mathematics minors has increased over 5 times.

More students are now graduating from the M.S. in Applied Mathematics program. Even though the number of newly admitted and matriculated students seems to remain steady since Fall 2009, the number of students completing the program

[REDACTED]

- All undergraduate recipients met the GPA requirement (>3.0) and mathematics courses requirements for Spring 2012 and Fall 2012 renewal.
- One, eight, and one undergraduate students in the cohort graduated in Dec. 2011, May 2012, and Dec. 2012, respectively. Four are currently pursuing graduate degrees in Economics, Physics, and Applied Mathematics.

**Outcome for Graduate Students in the M.S. in Applied Mathematics program**

- All graduate recipients except two in Spring 2012 met the GPA requirement (>3.2) for Fall 2012 renewal.
- All graduate recipients in Fall 2012 met the GPA requirement for Spring 2013 renewal.
- Five and two graduated in May and December, 2012. All are currently employed in STEM fields.

Workshops created for the scholarship cohort were open to the university community.

- For the R workshop: there were 13 faculty members and 17 students (5 not in the S-COAM program).
- For WinEdt/LaTeX/Matlab: there were 18 students (1 not in the S-COAM program).
- For LINGO/LINDO workshop: there were 3 faculty members and 15 students (1 not in the S-COAM).
- For C++ workshop: there were 2 faculty members and 19 students (1 not in the S-COAM).



