

CIRTL-at-Vanderbilt

Derek Bruff, Center for Teaching,
& Keivan Stassun, Physics & Astronomy,
Vanderbilt University



Teaching-as-Research Fellows Program

<http://cft.vanderbilt.edu/tar>

More
Info:



John Roseberry,
Earth & Environmental Science,
2010-2011 TAR Fellow

The Basics

- 5-8 STEM grad students each year
- Faculty hosts / mentors
- \$3000 "topping up" awards
- Orientation, working group
- One-credit-hour grad-level course
- Poster session



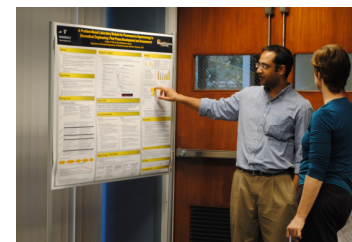
Karl Smith,
Guest Speaker,
2011 Poster Session

Goals

- To provide faculty with resources for curricular innovations
- To provide grad students with training and development
- To benefit the learning of undergraduates

Participants

5	MechE	4	BiomedE	4	EarthSci
3	CompSci	2	Astro	2	Math
		2	ChemE	1	Bio
				1	EE



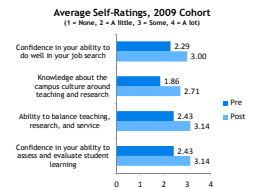
Chetan Patil,
Biomedical Engineering,
2010-2011 TAR Fellow

A Few Projects

- Getting a Feel for Dynamic Systems through Haptic Robots (Caleb Rucker & Jenna Toennies)
- Enhancing Astronomy Education through Cross-Age Student Tutoring (Erika Grundstrom)
- Implementing and Assessing a Challenge-Based Module for Spectroscopy in a Biomedical Optics Class (Elizabeth Vargis)
- Evaluating the Effectiveness of Clickers in a Biology Lab (Brian Robertson)

Feedback

"There is a connection between research and teaching, and this means you can get data to prove your effectiveness."
—Participant Feedback



"I think it's an incredible experience for her because she's actually been involved in developing something that I think will be widely adopted."
—Mentor Feedback

Fisk-Vanderbilt Masters-to-PhD Bridge Program

<http://www.vanderbilt.edu/gradschool/bridge>

The Basics

- Science majors at Fisk University (a HBCU) can earn a Masters degree in physics from Fisk, with full funding.
- Along the way, they receive research experience with caring, dedicated mentors from Fisk and Vanderbilt.
- They take courses and conduct research at both Fisk and Vanderbilt, yielding publication-quality MS theses.
- They also get fast-track admission to select Vanderbilt PhD programs, with full funding.



Facts & Figures

50 Bridge students to date

44 Underrepresented minorities

94% Retention rate

\$30 Million in extramural grants

1st in the nation for MS degrees in physics to Black US citizens (Fisk)

1st in the nation for PhDs in physics and astronomy to minorities (Vanderbilt)

The Research

- HBCUs produce 1/3 of all science BA/BS degrees earned by African Americans.
- Minorities are 50% more likely to earn an MS degree en route to the PhD. (Lange 2006)
- Minorities are more likely to earn the BA/BS, MS, and PhD degrees from three different institutions.



More
Info:

