



## ESSA (Engineering and Science Summer Academy)

June 22—Aug. 4, 2012



### Audience

ESSA hosted 17 incoming freshmen to Michigan State University. Five students were female and all students were underrepresented in the field of engineering. All participants declared engineering as a major prior to being admitted to MSU.

### Funding

Program expenses (~\$100,000) are provided by a National Science Foundation grant to the Michigan Louis Stokes Alliance for Minority Participation (MI-LSAMP), DTE Energy Foundation and Proctor & Gamble. University partners included the Office of Inclusion and Intercultural Initiatives and the Dean's Office in the College of Engineering.

### Objectives

ESSA was designed to:

- Prepare incoming freshmen to excel in math at the college level.
- Reduce Time-to-Degree by providing students an opportunity to move up 1 or more math classes by retaking the math placement exam.
- Equip participants with the writing skills to develop college level papers.
- Prepare students for college level Chemistry.
- Make participants aware of campus resources that can contribute to their success at MSU.

### Description

Done in collaboration with the Michigan Louis Stokes Alliance for Minority Participation, ESSA is a six-week, residential, academic intensive program designed to acclimate incoming freshmen with both the academic and environmental aspects to post secondary education. Participants attend daily classes in Math, English/Writing and Chemistry. Participants will also attend presentations from representatives in all engineering disciplines within the College of Engineering. **At the conclusion of ESSA, students were allowed to retake the math placement exam at the Testing Center in the Student Services Building under proctored conditions. This provided participants the opportunity to move up one or more math classes thus reducing Time-to-Degree.**

### Outcomes

- 88% of participants scored higher on the math placement exam administered at the end of ESSA.
- Students increased their math placement score by an average of 37%
- 80% of Math 1825 starters **moved up at least 1 math class.**
- 66% of Math 103 starters **moved up at least 1 math class.**
- 50% of Math 116 starters **moved up at least 1 math class.**
- **2 students moved up 2 math classes!**
- **1 student moved up 3 math classes!**

### Additional Significant Information

- A cross-college collaborative proposal by the College of Engineering and Lyman Briggs College has been submitted to the Provost's Office to expand ESSA as part of a larger retention initiative for at-risk STEM students.
- ESSA as a component of the Diversity Programs Office Scholars Program (DPO-SP) was one of only 4 programs nationally to win the NSBE (National Society of Black Engineers)/Exxon Mobil Impact Award (\$10K).

### Contact Information

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