NSF Aspire to Succeed STEM Scholars Program
2015-16 Report to the University of Saint Mary

In July 2014, the University of Saint Mary was awarded a $616, 402 NSF grant designed to mentor U.S. students through their Science, Technology, Engineering, Mathematics (STEM) undergraduate program and into a STEM graduate program or a STEM career.

With this goal as priority, the following programming features are mandatory for the students receiving scholarships.

- Meeting with the PI every two weeks
- Meeting with the PI and Co-PIs, collectively, every two weeks
- Being housed together in one FYE section
- Having a STEM service learning site assigned to them in their FYE
- A monthly STEM-focused Lunch Lecture
- A field trip every semester
- Two conferences during their undergraduate studies (sophomore and senior year)
- An annual Science and Mathematics Undergraduate Research Forum held at USM

Additionally, the following programming features are available, but not mandatory:

- Peer-led review sessions before exams in science and mathematics classes
- Science night, mathematics lounge, and tutoring through the Academic Resource Center (ARC)
- GRE preparation course if graduate school is desired
- Faculty-supervised research opportunities
- Internships

USM recruited the first cohort of seven students—beginning classes in Fall 2015: Terron Briggs, Don Berger, Melody Klein, Mary Perez, Layne Powell, Juan Tirado-Garcia, and Eric Santa-Cruz. Terron Briggs left USM in December 2015, but was replaced with Abby Logan.

During Fall 2015, USM held a kick-off social event, a mid-term social event, two lunch lectures, and a field trip to Union Station.

During Spring 2016, USM held two lunch lectures, a field trip to the University of Kansas, and a wrap-up social event.

Students are asked to evaluate every benefit or feature of the STEM program on a 1-4 scale (1 being very dissatisfied and 4 being very satisfied)—Table 1 (below) shows the mean satisfaction scores from the first year of the Aspire to Succeed STEM Scholars program.

Table 1: Mean satisfaction scores for programming features

Programming Feature	Satisfaction Score (1-4; 4 being very satisfied)
Cohort component	3.50
Service learning in FYE (3 sites)	2.50; 2.50; 3.00
Peer led review sessions, Fall 2106	3.64

Peer led review sessions, Spring 2016	3.51
4 Lunch Lectures	4.00; 3.33; 3.80; 3.86
Union Station field trip	3.71
KU field trip	3.25
Science and Mathematics Undergraduate Research Forum	3.59
Advising/Mentoring from PI	3.86

Moving forward, reflecting on the scores, the following are short-term improvement goals of the STEM Management Team:

- Be even more proactive in checking in with the STEM Scholars and their instructors every two weeks
- Fine tune the selection of the STEM service learning sites
- Hold three social events each semester, spread throughout the semester
- Fine tune the peer-led review sessions to ensure every session is offered to the STEM Scholars
- Hold STEM Advisory Board meetings

STEM Scholars are required to do the following in order to maintain their scholarship:

- Maintain a cumulative and major GPA of 3.00.
- Remain on track to graduate in four years, as outlined in their degree-specific four-year plan.
- Demonstrate continued interest in pursuing STEM careers and/or graduate programs, as determined by participation in STEM-related activities and discussions with the PI or Co-PIs during mentoring and advising sessions.

Given the high expectations of USM's STEM Scholars, the PI is working closely with each scholar to stay on track and maintain his/her scholarship.

The STEM Management Team consists of the following personnel:

- Caroline Mackintosh, PI
- Cassy Cozine / Dan Williams, Co-PI
- Rick Silvey, Co-PI
- Jemima Ingle / Masa Watanabe, Co-PI
- Todd Moore, Steve Herndon, Joseph Shih, Kathleen DeKrey, Hannah Colmer
- Kelly Stark, Kaela McWherter / Tara Lindahl, Nick Cale, Kay Kolb
- John Shultz et al
- Veronica Donovan

Any questions regarding USM's STEM Scholars program should be directed to Caroline Mackintosh at mackintoshc@stmary.edu.