

Grant Title: Women in Science and Engineering (WISE)

Location: Spelman College, Atlanta, GA

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Program Description:

The NASA Women In Science and Engineering (WISE) Scholars is an academic project with strong mentoring and research components, designed to encourage student to pursue graduate studies and/or advanced degrees. The project provides support for academically talented students who are interested in pursuing undergraduate degrees in one of the areas of physical science and/or engineering. Participants are provided opportunities for research experiences at Spelman College, NASA Centers and federal laboratories.

Program's Relevance To NASA

The project seeks to increase the number of underrepresented minorities entering the technical workforce at NASA and NASA contractors. Scholars are oriented to the culture and mission of NASA and the NASA Centers by participation in a paid 10-week summer internship at one or more of the Centers. By providing support for student training and education, NASA is ensuring that a resource pool of well-trained professionals is available for potential employment.

Program's Benefit to Society

The project attracts and provides for the training and education of diverse, intellectually bright and gifted women who are successful participants and major contributors in areas of science, mathematics, engineering and technology. They become leaders in the community, education, business, research and other fields of employment. Moreover, graduates of this project are role models and mentors to others, providing support, motivation and encouragement to persist in the sciences and engineering fields.

Goals of the Program

The short- term goal of the project is to provide underrepresented, academically talented female students with the opportunity to pursue and complete undergraduate degrees in science, engineering and mathematics. The long- term goals are to increase the number of minorities earning PhD and professional degrees in science, engineering and mathematics and to increase the numbers entering the workforce at NASA, other agencies and industry.

Program Accomplishments

The project had a total of 15 participants at the beginning of the fall semester of the 2006-2007 academic year, including: one (1) junior, seven (7) fourth- year dual degree engineering students and seven (7) seniors (including one fifth year dual degree

engineering student). The eight dual degree engineering students were enrolled in engineering programs at the Georgia Institute of Technology (2), Columbia University (1), North Carolina A & T University (2) and the University of Michigan (2). Seven (7) scholars were enrolled at Spelman College. All fifteen Scholars were retained the 2007 Spring semester.

Student Outcomes

During the 2006 – 2007 academic years, four faculty members at Spelman College mentored five scholars in research. These scholars gave 5 technical presentations at Spelman College Research Day, regional and national conferences, including MATHFEST, and at Northeastern/ Boston Universities (National Science Foundation (NSF) site visits).

Eight scholars completed graduation requirements for the May 2007 commencement including, one non-supported scholar who completed her Spelman degree requirements last May (2006) and her dual degree requirements at the University of Michigan in December (2006). Another senior also earned dual degrees from Spelman College and the University of Michigan. Four graduates were accepted into graduate school with competitive fellowships and financial support packages (one is enrolled at the University of Illinois Urbana Champaign in Aerospace Engineering and one graduate is enrolled at North Carolina State University in Operations Research. Four (4) students graduated with Latin honors and one student was inducted into the Phi Beta Kappa Honor Society. Four students were recognized at the Spelman College Honors Convocation and the Dual Degree Program Honors Banquet for outstanding academic achievement and excellence.

During the summer 2007, one scholar participated in a summer research experience at the Goddard Space Flight Center. Four Scholars were enrolled in summer school: two at the Georgia Institute of Technology; one at the University of Michigan and one at North Carolina A & T University. Two Scholars were released from the program at the end of the second semester.

Six Scholars are continuing in the project for the 2007-2008 academic year. Five are enrolled at three engineering schools, including two (2) at the Georgia Institute of Technology; two (2) at the University of Michigan and one (1) at North Carolina A & T University.

Other Funding

NASA WISE Scholars provided leverage in securing a 5-year grant from the ExxonMobil Foundation to support at least six Spelman College dual degree majors beginning September 2006. Six scholars were supported during the 2006-2007 academic year. One student graduated with dual degrees from Spelman College and Georgia Tech in May 2007. Seven ExxonMobil Scholars are supported for the 2007-2008 Academic Year.