

**NSF/HSI Grant
Achievement in Mathematics and Science (AMAS)
Program Description
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Estrella Mountain Community College received a \$130,000 National Science Foundation Grant targeted at Hispanic Serving Institutions (HSI) to increase student success in the areas of Science, Math, Engineering, and Technology (SMET).

The Achievement in Mathematics and Science (AMAS) Program began in the Spring of 2001 with the goal of piloting a mathematics recitation course (MAT 108) for Beginning Algebra through Calculus 1 and a Career and Personal Development course (CPD 100). The purpose of this pilot was to determine whether these courses would enhance student success in mathematics courses. First year Hispanic students from Estrella Mountain Community College were recruited to be in a Career and Personal Development Class. Eighteen students enrolled for the class and participated in various class exercises such as strategies for college success, career exploration and planning, scholarship and internship searches and many other topics that were of value to their first year experience. At the end of the semester students had developed a strong support system, familiarized themselves with the resources on campus, utilized the services of the Math and Writing Center and were confident in their ability to successfully complete college level course work.

The recitation courses were developed to enhance student learning by providing activities that engage students to investigate course content at a more in-depth level. Also, the courses were designed to allow participating students time to receive both individualized and peer tutoring. In the Spring 2001 semester, the mathematics faculty decided to implement 2 credit recitation courses to improve student retention rates in MAT 120/121/122 Intermediate Algebra, MAT 151 College Algebra, MAT 182 Plane Trigonometry, and MAT 220 Analytical Geometry and Calculus I.

A Summer Bridge Program was implemented in the Summer of 2001. Graduating Hispanic students from the feeder high schools were immersed in an eight-week college experience. Students attended classes in mathematics (MAT 091, MAT 121, MAT 151, MAT 181) or science (GLG 101/103) as well as a Career and Personal Development class (CPD 100). Tuition was free and students received college credit for the courses they completed. The Career and Personal Development class introduced the students to the various resources on campus. Working closely with Estrella Mountain's faculty and staff the recent graduates also explored professional opportunities requiring strong skills in SMET related areas. The Bridge Program sponsored a career luncheon with scientists, engineers, mathematicians and statisticians to discuss how science and math courses applied to their careers. The students also had the opportunity to experience a university setting by touring the University of Arizona, and applications of science and mathematics in a research setting by visiting Biosphere2. Twenty-nine students participated in the program and are all college bound. Twenty -six of the students enrolled at Estrella Mountain Community College.