

'Achievement in Math & Sciences'**Title V: Developing Hispanic Serving Institutions Program**

During the 2000 – 2001 academic year, Estrella Mountain Community College was awarded a one year Science, Mathematics, Engineering, Technology (SMET) grant by the National Science Foundation (NSF). The grant was to reduce the negative effects on student retention the “mathematics as gatekeeper” problem poses for students pursuing studies in (SMET) courses. The projects multifaceted approach included three major components: faculty / staff development; mathematics curriculum design, enhancement of students’ science learning opportunities. Outcomes of the project included a redesigned course that was piloted during a summer bridge program and the hiring of a bridge coordinator who coordinated internships, and other enrichment activities. An additional component of the NSF – SMET student success project was the National Symposium on Best Practices for Student Achievement in Science, Mathematics, Engineering, and Technology in Two – Year Hispanic Serving Institutions (HSIs), that was hosted by EMCC on April 27-28, 2001.

The *'Achievement in Math & Sciences'* / Title V: Developing Hispanic Serving Institutions Program will continue the initiatives started in the NSF project and through the implementation of best practices that support Hispanic Students and other low-income students. The best practices to improve student success incorporate three stages: matriculation, retention, and transfer. These stages and supportive activities are listed below:

Stage 1: Helping Hispanic students matriculate from the high school to the community college: practices and programs that recruit and prepare students for success in science, mathematics, engineering, and technology.

- Developing strong links to elementary, middle school and feeder high school
- Involving the parents and family in the educational process
- Supporting professional development programs for high school teachers in SMET
- Ensuring availability of appropriate instructional technology

Stage 2: Retaining Hispanic students in the community college: programs and services designed to help Hispanic youth succeed in lower division courses.

- Improving student confidence by providing networks with peers, faculty and staff
- Improving counseling and advising
- Providing role models/mentors to interact with students
- Ensuring that students have the basic skills to succeed in college math and science courses
- Offering appropriate SMET pedagogies for student success
- Providing professional development for SMET faculty
- On-going analysis and evaluation
- Ensuring availability of appropriate instructional technology

Stage 3: Helping Hispanic students matriculate from the community college to four year schools or to the workforce programs and services which enable Hispanic students to transfer to and succeed at employment or upper division institutions.

- Developing strong transfer links to universities and employers
- Developing instructional linkages with universities
- Develop professional internships for students