

**Math and Science Teacher Summit
March 2, 2006 ~ 9:00 AM – 1:30 PM
City of Industry, CA**

Let me begin by describing the “platform of partnership” from which our initiatives proceed.

SDSU has a long history of partnering with K-12 education to provide professional development for mathematics teachers.

- **Since 1981, SDSU has participated in the San Diego Mathematics Project, one of 22 programs in the California Mathematics Project.**
 - **Its goal is to enhance the quality of California's K-12 mathematics education by increasing teachers' mathematical and content knowledge, pedagogical skills, and leadership skills.**

- **During the past 10 years, the San Diego Mathematics Project has worked with over 1,900 teachers.**

- **In 2000, San Diego State's Professional Development Collaborative became involved in a three-way partnership with San Diego City Schools and our local Foundation for the Improvement of Mathematics and Science Education that seeks funding from corporations and foundations to support mathematics and science improvement in San Diego City Schools.**

- **To date, over 250 teachers have completed our Math Specialist Certificate Program offered by the Professional Development Collaborative.**

- **SDSU’s “Improving Student Achievement in Mathematics” project was created in 2004 with funding provided by QUALCOMM.**
 - **Its goal is to help improve student understanding of and achievement in mathematics by boosting teachers’ content knowledge and improving teaching methods in grades K-12.**
 - **The project staff works with district partners to design and implement programs to meet district, school, and teacher needs.**
 - **We currently have individualized partnerships with several local school districts including Lemon Grove, Ramona Unified, Sweetwater Union High School, and the City Heights Educational Pilot.**

Like other CSU campuses, SDSU has a long history of partnering with K-12 to provide outreach and access to higher education.

- **Our Compact for Success is an innovative partnership between SDSU and Sweetwater Union High School District (California's largest and most diverse secondary school district) designed to increase college readiness among low-income students.**
 - **The Compact for Success is a comprehensive reform initiative to enhance university access, retention, and college completion by graduates of the Sweetwater District, where more than two-thirds of the students are Hispanic.**

- **We began this highly successful program in the spring of 2000 by offering guaranteed admission to San Diego State to seventh graders who successfully meet more rigorous academic standards, college entrance requirements, and other program benchmarks.**
- **To date, we have offered that guarantee to over 35,000 students.**

- **SDSU’s “Office of College Readiness Programs” supports the recruitment and training of SDSU students of mathematics and literacy who are future teachers.**
 - **They each have a supervised field experience, averaging 100 hours per semester, tutoring in San Diego schools.**

- **The SDSU “Early Assessment Program” (that was the original pilot for the now statewide program) provides opportunities for students to measure their readiness for college-level English and mathematics in their junior year of high school, and to facilitate opportunities for them to improve their skills during their senior year.**

SDSU's efforts to dramatically increase math and science teacher production have also benefited from our strong relationship with the region's community colleges.

- **Access to SDSU from community colleges has been improved in two important ways:**
 - **First, SDSU has formal articulation agreements with its 55 top feeder community colleges. You can view these agreements for yourself at www.assist.org.**
 - **Second, our Transfer Studies Degree Agreement provides an opportunity for guaranteed admission to a major given satisfactory completion of SDSU requirements and any additional criteria required for that major.**

- **SDSU is a full member of the San Diego/Imperial County Community Colleges Association was created to strengthen collaboration between the six college districts and their nine community colleges and area universities.**

Building on this context of existing partnerships, SDSU will develop a comprehensive program to significantly increase its credential enrollments in mathematics and science. That program has three “doable” components:

- **The first will focus on recruiting from among students already enrolled at San Diego State.**

- **The second component will recruit from our seven service area community colleges.**
- **The third will add new pools of students by identifying and mentoring high school students interested in teaching mathematics or science.**

Let me be more specific about each of these three initiatives:

- **The first initiative will focus on liberal studies majors and majors in exercise and nutritional sciences.**
 - **With a small amount of additional mathematics instruction, we believe they will be able to pass the California Subject Education Test (CSET) subtests needed for the Foundational-Level Mathematics Credential.**

- **Two mathematics courses will be offered during the summer of 2006 for 30 liberal studies majors with a specialization in mathematics.**
- **We will also offer two classes to help Exercise and Nutritional Sciences majors pass the biology CSET. In this manner, students preparing for other careers will have the option of considering a career as a secondary math or science teacher.**
- **The second initiative takes advantage of the relationships and resources developed through our community college partnerships.**
 - **It will focus on Southwestern Community College, which has an ethnically diverse student population.**

- **We will work with community college counselors, along with mathematics and science faculty, to identify and contact students who are interested in mathematics and science majors. As part of our Compact for Success, these students will be offered jobs as tutors for Sweetwater Union High School District.**
- **The students who will be tutored are part of our Compact for Success. The tutoring will help them meet high school graduation and A-G requirements.**
- **High school teachers who have been involved with the San Diego Mathematics Project will provide training and supervision of mathematics tutors.**

- **The Math/Science Teacher Initiative staff will provide workshops and information about teaching for the community college student tutors.**
- **The Math/Science Teacher Initiative staff will track community college tutors who transfer to SDSU and provide them with assistance in entering teacher preparation programs.**
- **Our staff will connect them with single subject advisors, the SDSU Future Educators Association, and the College of Education Office of Advising and Recruitment.**
- **We will provide community college transfer students with financial aid information, particularly information**

about scholarship and loan forgiveness programs such as Assumption Programs of Loans for Education (APLE).

- **Our third initiative will focus on middle and high school students through the Future Educators Association clubs at school sites.**
 - **The Future Educators Association is a national organization with student-led clubs on high school, community college, and university campuses.**
 - **The organization at SDSU is supported by Associated Students and functions as a student-led organization for undergraduate and credential students interested in teaching at the K-12 level.**

In closing, let me emphasize the urgency of our situation. The districts in San Diego and Imperial Counties have estimated that, because of enrollment growth and teacher retirements, they will need at least 900 new math and science teachers in the next decade.

If nothing changes, the three public institutions in our region – UCSD, CSU/San Marcos, and SDSU – together will meet less than 50 percent of that demand.

If we do not act boldly, the present shortage of math and science teachers will rapidly escalate into a major crisis. School districts will be unable to deliver the mathematics and science courses required for high school graduation.

In our region, SDSU is committed to working with public school districts, community colleges, and other public universities to dramatically increase production of qualified math and science teachers to address this crisis.

Through longstanding partnerships and initiatives such as I have described this morning, we at SDSU are committed to accomplishing this important work.