



### SUPPORTING DIVERSE STUDENTS

National and regional reports continue to reveal science as one of the main content areas used for sifting and sorting students—especially children of color and females. Recent science teacher education reports continue to stress the need for radical changes in the way teachers are prepared to teach science to diverse learners. To overcome such institutional boundaries generic inclusive pedagogical strategies are not effective for helping children from diverse cultural backgrounds achieve in science. This program will help teachers interested in assisting girls and children of diverse cultural backgrounds achieve in science learning communities. We will accomplish this goal by demonstrating how to integrate learning technologies into effective science teaching drawing from current research on bilingual education, cognitive science, gender education, multicultural education, and quantitative and qualitative methodologies.



### SCIENCE TEACHING & RESEARCH

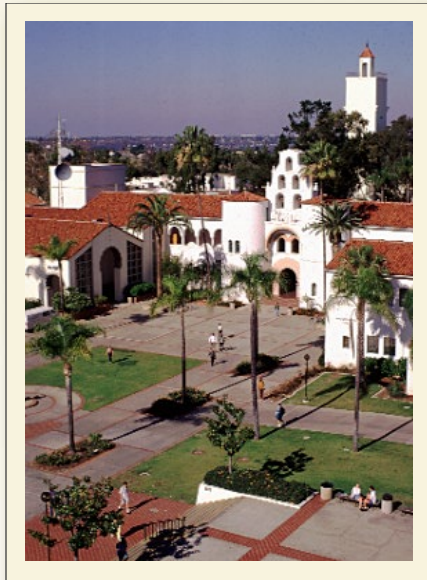
The program is designed to support the professional development of K-12 teachers and is also recommended for curriculum developers, administrative leaders and informal science educators. With special attention to **science, technology and cross-cultural education**, this C&I program consists of 30 units of coursework, offered during four semesters and one summer session with a careful balance of theory and practice in every course semester. Courses will be taught two days per week in the late afternoon/evening. The thrust of the candidates' studies, projects and research will focus on the learning and teaching of science and technology with specific attention paid to issues of equity, gender, and cultural issues. To Apply Contact: Cecilia Necoechea at (619) 594-6544

OR VISIT [HTTP://EDWEB.SDSU.EDU/STE/](http://EDWEB.SDSU.EDU/STE/)

# SDSU

## MASTERS PROGRAM IN EDUCATION

### CURRICULUM & INSTRUCTION



WITH SPECIAL ATTENTION TO SCIENCE, LEARNING TECHNOLOGIES AND CROSS-CULTURAL EDUCATION

San Diego State University is one of the leaders in science education, technology education, and cross-cultural and policy studies. This unique Masters program beginning in Fall 2006 will offer graduate students the option to experience all the best SDSU has to offer.

*Application Deadline Extended to June 1st*



# Science Education in San Diego

## TOPICS OF STUDY

In what specific ways can science teaching be made more culturally and socially relevant in diverse schools?

In what ways can teachers promote a more gender inclusive environment that encourages the participation and academic achievement of girls in the science classroom?

What pedagogical strategies can be used to make the standardized curriculum more engaging to students through scientific problem-posing and problem-solving?

What does it mean to know science? Is learning a different process influenced by the individual's cultural background? If so, in what ways?

Why is science education continually under reform and how do current local, national and international reforms compare to historical trends?

How might we use technology in the classroom to improve science instruction for all students and at the same time still teach science in a ways that best reflect the discipline?

What steps can teachers take to promote inquiry among their students and how can we promote high standards for all our students?

Why isn't hands-on science enough to ensure deeper scientific understanding and how can teachers research their own our practice to benefit all of their students?

## FOCUS OF THIS UNIQUE MA PROGRAM

This Master of Arts program, which is offered through the College of Education is designed to focus on teaching science in grades K-12, while a Master of Science program focuses specifically in science content knowledge. Research over the past two decades clearly indicates that content knowledge alone is insufficient for teaching content well. While science courses can enhance a teacher's content knowledge preparation to teach science, science content courses seldom apply

directly to expert pedagogy or development of exemplary curricula used in elementary and secondary public school contexts as well as informal education institutions. While there will be some science content knowledge and research incorporated into our classes and the option for up to 6 graduate credits of advanced science study, the primary emphasis in these courses will be science teaching and learning. Our cohort model also gives you an opportunity to build relationships with fellow students in all of your classes where direct contact and collaborations with scientists learning to teach is quite likely.



## ACCOMMODATE TEACHING SCHEDULES

*We have structured the program to accommodate the schedules of full-time teachers and informal science educators as well (e.g.: museum employees). For example, all classes are scheduled to begin after 4:00 PM. In addition, while homework will be assigned in your courses, your instructors are conscious of teachers' time commitments and will work with you accordingly. Finally, a good deal of the course work can apply to your own teaching experience.*



## COURSE SCHEDULE

FALL 2006	ED690	TE605
SPRING 07	PLC612	TE610
SUMMER 07	TE655	PLC686
FALL 07	ED795A	TE600
SPRING 08	ED795B	PLC601