

## **More than the Classroom at Trinidad State Junior College in Southern Colorado**

Debra Krumm, PhD  
Geology/Biology Faculty  
Trinidad State Junior College Math/Science Division

Addition of new faculty plus the receipt of U.S. Department of Education STEM grants has allowed for the expansion of science education at Trinidad State Junior College (TSJC) in southern Colorado. The ultimate goal of the STEM grants is to increase the number of Hispanic and low-income students going into STEM careers. To accomplish this, TSJC is working to create a STEM-friendly environment where students encounter other students interested in STEM subjects and where it is easier for them to find mentors and resources such as transfer information to help them accomplish their academic goals. The addition of new science faculty supports these efforts and broadens the opportunities available to students seeking Associate of Science degrees or transfer to Bachelor of Science STEM programs.

Trinidad State Junior College is located near the New Mexico border in south-central Colorado with a satellite campus in the San Luis Valley in the south-western part of the state. Both locations are rural with large minority populations and widespread poverty. Community college students raised in such areas are often first generation (neither parent has a bachelor's degree) and almost always need developmental math and English courses when they arrive. Therefore, majoring in the STEM disciplines is not on the radar for most freshmen at TSJC. This situation is compounded by a widespread lack of exposure to STEM careers in junior high and high school.

Both the TSJC science faculty and the STEM staff are working hard to change this situation. STEM academic coaches have started giving classroom presentations on STEM careers at the middle and high schools. They then act as mentors every step of the way as the students enter the college environment. A successful STEM staff/science faculty partnership has been the creation of a STEM student club. A geoscience faculty member acts as club advisor (myself) and a STEM staff member provides information on a different STEM career at each meeting (usually tied to a fun activity like Mentos in soda). The addition of new science faculty has also allowed for offering of new courses and for increasing undergraduate research opportunities. Previously, there were not enough courses in many STEM disciplines for students to be able to complete their A.S. degrees at TSJC before transferring to a 4-year school. Being able to expand options benefits both the students and college enrollment figures. A blossoming interest among the faculty in undergraduate research as well as additional resources supplied by the STEM grants complements the new courses and better prepares the students for what they can expect at 4-year colleges and universities. It also makes them more competitive for transfer.

Many obstacles remain such as concern over enrollment in new courses. This should improve as a STEM community of students is formed and word spreads. Maintaining interest in a STEM program over the two years of community college and beyond remains an obstacle as courses increase in difficulty. With our population, outside influences such as jobs and family constantly erode at a student's determination to finish. However, we are starting to see small successes after our first year combining mentoring with new classes, extra tutoring, clubs, field trips and other STEM-related opportunities. This all-encompassing approach to promoting STEM inside and outside of the classroom seems to excite both our student population and our STEM faculty and holds a lot of promise for the future of all sciences including geoscience at TSJC.