Vol 1 Issue 3

science • technology • engineering • math
UNDERGRADUATE PATHWAYS
CNM Central New Mexico Community College
UNM

The "UPDATE"

Freshman STEM Project at UNM

On September 29, students gather at the SUB for Freshmen STEM night

In this Issue:

This fall semester, STEM UP and STEM Gateway collaborated to create the Freshman STEM Project (FSP) a program that is unique in that it targets the student who is interested in a Science, Technology, Engineering or Math major very early in their college career, and provides critical academic and student centered resources. Kevin Smith, the Program Advisement Coordinator of the FSP, stated that the program offers services that will help the freshman student be successful in their first term at UNM. The FSP is a key program that identifies STEM students and is guided by three strategic goals. First, establishing professional mentoring partnerships with successful individuals from Sandia Labs will offer students a glimpse into the profession, and link education with real world applications. Second, students participating in FSP will have ongoing dialogue through the use of Blackboard with their mentors. Last, built into the program are monthly evening events that bring the mentor and the freshman student together to network and establish strong relationships.

With the launching of the Freshman STEM Project, a key component of the program is the formation of the Math Den. The Math Den pairs a Student Education Leader with a FSP student with the purpose of offering math support within small study groups on campus. Students are also paired with a Success Coach, where they will develop strong college skillsets, such as balancing their classwork and their personal schedules, coping with test anxiety, and how to be an advocate for themselves.
The success of the FSP will be tracked by examining retention as well as fall 2016 semester math grades. The Project will also solicit feedback and evaluations from the participating students, Smith added.

Breaks for Holidays

Christmas Break
CNM
December 21-Jan 1

UNM
December 23-Jan 1

Hit The Ground Running 2016
January 14 and 15

STEM Week 2016
March 14-18

Freshman STEM Project Leader Opens Doors for Opportunity

STEM UP is pleased to introduce a new addition to the CNM/UNM STEM UP Cooperative grant. Dr. Kevin Smith earned a Ph.D. in biochemistry, conducting research in respiratory diseases as well as studying the link between pollution and damage to the lungs. Smith's academic research prepared him for his professional track in the pharmaceutical industry where he engaged in research developing medicines for respiratory diseases such as asthma and emphysema. During this time Smith participated in mentoring staff, and recognizes the value of working for a grant that focuses on promoting student success in the Science, Technology, Engineering and Math degree areas .


Kevin Smith

Many new students in college do not have any idea of what they want to study, and Smith was no exception. Smith explained that he started taking general coursework for his degree and realized that the Introduction To Chemistry course fascinated him. He shared his interest in organic chemistry because he can apply it easily to life sciences. As an undergraduate student, he taught supplemental instruction classes, worked as a teaching assistant, and as a tutor. The experience he gained working with STEM students has been helpful in his current role as Program Advisement Coordinator the STEM UP CNM/UNM Cooperative grant. When asked about his future plans, Smith shared that he will continue his career in higher education.

Former SEL Explores Her Major

Shalaine Buck, the Data Analyst Coordinator for the STEM UP grant, began her career with the grant in 2013 as a Student Education Leader (SEL). While completing her core classes and Associates of Arts degree at UNM Gallup, Buck had her sights set on transferring to UNM Main campus and competing her Bachelor's degree. Once on Main campus, Buck declared Computer Science as her major, but after taking several math courses, she found her interest had changed. During this time, Buck decided to follow a new route and declared a new major in Math, with a minor in Statistics. Having graduated in spring 2015, she is on course with a career in data and statistical analysis for the STEM UP grant.


Shalaine Buck

While serving on the grant as a SEL, Buck shared that she grew both personally and professionally. Opportunities for public speaking, an area that had proved to be difficult for Buck, were plentiful and gave her confidence to address students in both large presentations as well as in one-on-one situations. Buck is an ardent proponent of the STEM UP Transfer Articulation Agreements, which provide a seamless pathway for the student at CNM to transfer their college credits towards their major at UNM. When asked if she had any advice for new students, Buck stated that she would encourage more females to explore the idea of majoring in a Science, Technology, Engineering or Math major. As an undergraduate student, Buck noticed the low enrollment of females in her STEM classes, something she would like to see changed. She shared that she is open to new learning and career opportunities, and has considered the possibility of graduate school with a major in Statistics.

STEM Cohort at CNM Provides Resources for STEM Students

CNM's STEM Cohort was established by CNM's Faculty Sponsor John Diggelman. CNM offers Associate of Science degrees for all STEM majors except for Nutrition. In order to be a part of the STEM Cohort, students need to be full time, enrolled in 15 to 18 credit hours, faculty leader Heather Fitzgerald says.
The Cohort is open to incoming freshman and sophomores. Students can receive advisement through the department of Math, Science and Engineering (MSE) and participate in one on one seminars. Through the STEM Cohort, students are exposed to more opportunities, have the opportunity of receiving peer support, and will graduate in five terms.

The STEM Cohort started in fall 2015 with the purpose to increase graduation rates. The Cohort has about 50 students, but the goal is to have more active students or they may need to try a part time cohort, Fitzgerald says. One reason for the smaller enrollment of students may be due to the challenging admission requirements. Faculty and staff are doing their best by visiting high schools and recruiting students. After fall 2015 term, the Cohort will determine what will work and what doesn't. STEM UP tutors also assist with the Cohort and dedicate all their resources to support libraries and student clubs.

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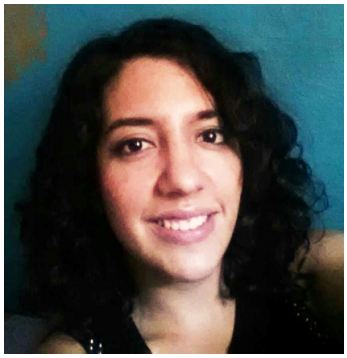
Fitzgerald will continue to be a mentor for the STEM Cohort for at least five terms and would like to recruit more freshman in the spring by conducting high school visits, she says. She wants to help students transfer more efficiently and finish their degrees with the correct classes. The relationships students develop in the cohorts and with each other go beyond institutional support, she says.
So far, there are nine students in the program and they meet every Friday from 9 to 10am. The program has speakers who present at the library and there are plans to develop internships and add more folks in, Fitzgerald stated.

Students gather outside the student resource center at CNM during STEM week in March

CNM SEL Explores NASA



Melissa Montoya

CNM SEL Melissa Montoya received an opportunity of a lifetime from an email which was send to all of the community colleges in the United States. The email offered a hands on experience at one of the NASA space centers. In preparation, she took a five week online class with guest lecturers and she was the only one from New Mexico who attended. Montoya was placed at the Johnson Space Center in Houston, Texas where she designed various projects and researched two rover competitions. She worked with an engineer from NASA and four groups of individuals.

As one of her projects, Montoya chose the assignment of drilling the North Pole. While at NASA, she toured different buildings, including the robotics lab with projects, and a mission control tour. Another highlight was the tour of Rocket Park. On the last day, she participated in a space walk. Montoya is majoring in math and wants to transfer to New Mexico Tech to pursue a Physics degree. Her academic focus is in research. Montoya commented that more women need to be in STEM.

Internship Opportunities

Visit this site to see what is available for your major
http://www.pathwaystoscience.org/Discipline.aspx

NASA Internship
http://www.nasa.gov/offices/education/centers/johnson/student-internships/#.Vk4Fa3arRaQ

STEM Internships, Fellowships and Mentoring
http://energy.gov/diversity/stem-internships-fellowships-and-mentoring

CNM Transfer Center
Phone: 224.3253
Email: stem_up@cnm.edu

UNM Transfer Center
Phone: 277.0541
Email: stemup@unm.edu

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STEM UP Mission Statement
Through a CNM and UNM Cooperative, STEM UP provides students with guidance, support and academic pathway towards STEM graduation