While many schools were feeling the lull of quiet summer months, Los Angeles Mission College was buzzing with excitement over the STEM Summer Academy, a major component of the STEM Program. Our first STEM Summer Academy blended academic and supportive services that assist incoming and recently enrolled Mission students pursuing STEM degrees. From July 9th to August 8th, over 90 students participated in a Math Boot Camp, Writing for Science Workshops and Personal Development courses. A special session was held for Cesar Chavez Academy of Scientific Exploration students during the Summer Academy.

**Early Exploration with Cesar Chavez, ASE**

In collaboration with the Title V-ISSA (Improving Student Success and Access) Program, the STEM Program welcomed 23 students from Academy of Scientific Exploration (ASE) at Cesar Chavez High School. Designed as an added feature of the STEM Summer Academy, the four-day workshop from July 30th to August 1st included four separate lab experiments in physics, microbiology, and anatomy along with two sessions in scientific writing. “The only thing I would recommend is that it be longer,” said one student. Early intervention and exposure are crucial in STEM academic success—these students obtained both during the week. A special thank you to our faculty from the Life and Physical Sciences Depts.—Dr. Brown, Mr. Reynolds, Mr. Rains, and Dr. Echeverri—who volunteered to offer the labs.

**ASE students toured the newly built Center for Math and Science**
The Sky is the Limit

On July 19th, a guest speaker from Jet Propulsion Laboratory (JPL) joined the Summer Academy group via videoconference to talk about its history and accomplishments. “I was especially intrigued over the Ion Propelled Engine,” said one student, “It was like something out of Star Trek. It opens up a whole new realm of space exploration.” Some students were aware of JPL and NASA’s projects but for many, this was their first exposure. After the presentation, the focus quickly turned to career paths and internship opportunities. One student expressed his enthusiasm about the prospects: “I was given career options to consider. I’m excited.” The STEM counselor added, “The doors are wide open for our students to explore their options in these fields where the jobs are plentiful.” The presentation from JPL is one of many events arranged through the STEM Summer Academy.

Writing for Science

The 3-week “Writing for Science” Workshop during the Summer Academy covered three main writing skills: grammar, research, and format. After discussing each concept, students were given the opportunity to practice each skill and apply their learning in a tangible way. Working in the computer lab offered the ability to do hands-on research, providing students the chance to do and not just think about concepts theoretically. Three sections were offered and there was excellent attendance. Students were motivated and focused, even asking for a video of the workshops. The videos were created and uploaded on the Title V eLab site at http://elearning.lamission.edu for easy access to all interested students. The Writing Workshop was in collaboration with the Title V ISSA Program.

STEM Math Center

The STEM Math Center provided tutoring services for all students enrolled in the STEM Summer Academy. STEM tutors and supplemental instructors have been trained in classroom technology and online resources to assist the growing population of students enrolled in hybrid classes or classes that combine traditional lecture with computer-aided instruction. Designated staff members have been evaluating and organizing available online tutoring materials to be posted in the Math Center and STEM websites. For the Fall 2012 semester, the STEM Math Center has served more than 500 students (about 6,000 hours) up to November 6.

Location: CMS 121
Fall Schedule:
Monday to Thursday
11:00am to 8:00pm
Saturday
10:00am to 2:00pm

“THE MOST BEAUTIFUL THING WE CAN EXPERIENCE IS THE MYSTERIOUS. IT IS THE SOURCE OF ALL TRUE ART AND SCIENCE.”

ALBERT EINSTEIN

Students receive tutoring and supplemental instruction at the STEM Math Center in CMS

Page 2
STEM Upgraded

The STEM Program increased technology across STEM curriculum by purchasing Camtasia Studio licenses, PC tablets, a classroom set of laptops, and a Mathematica site license. Faculty training sessions for the use of Camtasia and Mathematica were held during the summer and full-time math instructors have been developing tutorial videos and homework solutions. Mathematica applications have been incorporated into 200 level math courses such as Trigonometry, Precalculus and the Calculus sequence. All students enrolled in those courses received an access code to install Mathematica in their home computers. Another major activity of the STEM Program is the renovation of the Computer Science lab in the Instructional Building. Since the summer, the Inst. Rooms 2005-2010 have been undergoing renovation to include computer workstations and better reconfiguration of the rooms. The renovation is complemented by curriculum development in the discipline.

Outreach and In-reach

STEM Outreach Team and counseling have been instrumental in reaching out to our local high schools and informing students on the various STEM career options available to them. STEM counseling also provides assistance in obtaining scholarships, securing internships and volunteering opportunities. STEM students are currently volunteering at local hospitals and local libraries. The team believes strongly in working with teachers and counselors in order to help them prepare their students for pursuing a STEM major. In Fall 2012, the Outreach Team has met with 230 local high school students from Arleta, Ceasar Chavez, Kennedy, Monroe, San Fernando, Sun Valley, and Sylmar.

Counseling and Transfer

STEM Counseling is offered Monday to Friday from 8:00 a.m. to 4:30 p.m. except on Wednesday from 12:00pm to 6:30pm. Students can get appointments within the week! A transfer plan is devised for students to transfer successfully to the four year university and a semester by semester plan is written in order to ensure that students graduate and transfer in a timely fashion. Career advisement and help with the application process to the UC and CSU can be obtained through our program. During its first year, STEM counseling has provided Personal Development Courses which teach students effective study strategies to become master students! All STEM students are required to meet with the STEM counselor once or twice a semester in order to receive guidance on course selection. The success of STEM students is our goal!

I just wanted to say thank you for inspiring me to be in the STEM program. If it wasn’t for you (Dr. Mohammadian) announcing it in our Biology class last semester, I would still be undecided in my major. Also, I took the MDTP for the math 125 workshop and passed with flying colors! I am now on my way to math 240 next semester! Thank you again...

STEM Summer Academy Student
STEM Learning Community

STEM Learning Community will pilot sections in Math 240, Math 260, Organic Chemistry 211 and 212, and Physics sequence 37, 38 and 39. The STEM Learning Community will pilot these seven major courses to approximately 100 students in the next two years (2012-2014). Of the seven courses identified in the STEM Learning Community, five courses—Organic Chemistry and Calculus-based Physics series—have never been offered at Mission. These are mandatory courses for transfer and highly demanded by students who previously left Mission to seek the courses elsewhere. Students participating in the Learning Community will also be exposed to innovative technologies and scientific practices. Both Math 240 and 260 courses will continue to use the free courseware (MyMathLab) piloted in the Summer Boot Camp in Summer 2012. Math 260 will incorporate Mathematica applications in related STEM disciplines. In Chemistry, the faculty members are working on the curriculum for Green Organic Chemistry laboratories which is an up-and-coming practice at the college level. Lastly, the Physics labs will use computer-aided data acquisition and analysis with state-of-the-art Vernier sensors and software.

Follow us on Facebook LAMC STEM and keep up with STEM news on our website at www.lamission.edu/STEM!

STEM Staff—Ready to Help!

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