Director’s Message

As year 3 of the grant ends, I am excited to share data demonstrating academic and persistence success among (STEM)² students.

Noteworthy comparisons:
Those who participated in the Summer Research Experience (SRE) program and transferred to CSUF had the best academic success among the four groups. Academic Success defined as having highest percentage in GPA above 2.0 (Good Standing), GPA above 3.0 (Dean's List) and least on Academic Probation.

Both SRE and Academic Transition Program (ATP) students had higher rates of persistence in the STEM major and university than Non-ATP students and Total STEM Transfer Class with no program students leaving the STEM major or the university. *(For additional data information, see page 5)*

-Dr. Maria Dela Cruz, (STEM)² Director

### First Semester At CSUF

<table>
<thead>
<tr>
<th>Programs</th>
<th>Good Standing 2.0</th>
<th>Dean's List 3.0</th>
<th>Probation</th>
<th>Left STEM Major</th>
<th>Left CSUF</th>
<th>Medical Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRE (19) (2012-2013)</td>
<td>17</td>
<td>8</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>ATP (60) (F13-S14)</td>
<td>45</td>
<td>21</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>NON-ATP (STEM)² (14) (F13-S14)</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Transfer Class (530) (F13-S14)</td>
<td>355</td>
<td>65</td>
<td>110</td>
<td>35</td>
<td>80</td>
<td>0</td>
</tr>
</tbody>
</table>

- SRE – Summer Research Experience (2012 & 2013 cohorts)
- ATP – Academic Transition Program (Fall 2013 & Spring 2014 cohorts)
- NON-ATP (STEM)² are students from our 3 grant partner community colleges who chose not to participate in ATP when they transferred to CSUF
- Total STEM Transfer Class (Fall 2013 & Spring 2014 Natural Sciences & Math and Engineering & Computer Sciences majors) data provided by Institutional Research

In this issue:
P2: Staff on the Road, Peer Mentor Corner
P3: Campus & Community Outreach/Engagement
P4: ATP Update, CSUF Edison Scholarship
P5: REU Tips for Success, Other Data News
P6: SACNAS Conference
P7: SCCUR Conference, Calendar, Farewell & Thank You
Dr. Maria Dela Cruz attended the Hispanic Association of Colleges and Universities (HACU) Annual Conference in Denver, Colorado on October 5-7, 2104.

Felipe Salazar attended the Society of Advancing Chicanos/Hispanics and Native Americans in Sciences (SACNAS) National Conference along with two (STEM)² students, Robert Gudino and Valeria Gonzalez, in Los Angeles on October 16-18, 2014 (see article on page 6).

Dr. Maria Dela Cruz, Felipe Salazar and Sam Barrozo attended the National Association of Student Personnel Administrators (NASPA) Regional Conference in Anaheim on November 10-12, 2014.

New Peer Mentor Corner

Haroon Khan
Electrical Engineer major and Physics minor

I grew up in Southern California up until I became a teenager when I moved to Dubai with my family, and now, finally, I am back in California pursuing a degree in Electrical Engineering. I plan to specialize in Avionics and satellite communication systems. Experiencing many different cultures and lifestyles gave me the desire to help others through the pursuit of science and engineering. My ultimate goal is to make positive impact in the world by becoming proficient in my selected major whilst expanding my knowledge in all areas of science, technology, and math. For fun I like watching and playing soccer and cricket. I also enjoy eating, reading, and meeting new people from different backgrounds.

Andrea Kuipers
Biology and Chemistry major

My name is Andrea Kuipers and I am also a transfer student. The last college I attended was San Diego Community College, although I have explored many different majors and therefore a variety of different schools and experiences. I found my true calling in science research after winning a long battle with an autoimmune disorder. Not only has this pushed me to pursue degrees in biotechnology and chemistry, but also has given me quite an exuberance for life. When I am not studying for my classes or working hard in Dr. Meyer’s research lab, I can be found at the local arcade or comic book store. I also write for a STEM website for fun as I love all things science and sometimes feel the need to deploy my enthusiasm online or better, to an open ear.
CSUF Preview Day

On Friday, October 3 (STEM) welcomed students from Citrus, Cypress, and Santiago Canyon College to its annual Preview Day. Formally known as “Lab Tours Day,” Preview Day provides prospective transfer students an opportunity to visit research labs in the College of Natural Sciences and Mathematics, and the College of Engineering and Computer Science. Through peer mentor-led tours, students not only gained access to research labs, but also met professors and student researchers who provided them an overview of the variety of research projects taking place on-campus. Following the lab tours, students attended a workshop where they learned about the transfer experiences of current Academic Transition Program (ATP) students. The panel of ATP students discussed why they chose CSUF and why it was a good fit for them. The central goal of Preview Day was to expose students to CSUF and its resources. For those students applying for fall 2015, this was a great opportunity to learn why CSUF would be a good fit for them.

We would like to thank the faculty – Dr. Chris Meyer, Dr. Maria Linder, Dr. Paula Hudson, Dr. Zhuangjie Li, Dr. Niroshika Keppetipola, Dr. Kristy Forsgren, Dr. Geoffrey Lovelace, Dr. Angel Pineda, Dr. Binod Tiwari, and Dr. Kiran George – Mr. Sergio Guerra, Director of Center for Academic Support in Engineering and Computer Science (CASECS), and the graduate and undergraduate researchers who took time out of their busy schedule to meet with our students.

Bat Night at Tucker Wildlife Sanctuary

On Saturday, October 18, Peer Mentor Haroon Khan volunteered for Tucker Wildlife Sanctuary’s annual fundraiser, Bat Night. This special event provided attendees with an interpretive bat program, crafts and games, pumpkin carving, wagon rides, and good food. All proceeds went to supporting Tucker Wildlife educational programs. Tucker Wildlife Sanctuary serves as a field research center for college-level students from various disciplines, including biology, hydrology, geology, botany, teacher education, and environmental studies. It also promotes science and environmental education for younger students and the general public, offering field trip opportunities for K-12 schools, group tours for organizations, and weekend programs and special events for the community.
This past fall semester, we had sixty-one students participate in the Academic Transition Program. The focus of our program was to assist our STEM transfer students’ acclimation to CSU Fullerton and increase their familiarization with the academic resources as well as the student support services on-campus. Students joined STEM related clubs and engaged in academic development activities such as tutoring, supplemental instruction, office hours, and department seminars hosted by the College of Natural Sciences and Mathematics. Students met with their peer mentors each month to discuss a variety of topics such as setting goals, study habits, time management, resources, and opportunities. Lastly, students either participated in our Early Warning System or Academic Progress Report session where they met with me to discuss ways their volume of course-work, how to balance their time between work, family, and academics, and discuss ways to either maintain or improve their grades, especially in their major courses. Through these activities our students became more aware of course work, campus resources, study techniques, and time management skills to work towards a successful transition to CSU Fullerton.

Come spring 2015, we expect twenty STEM transfer students from our partner community colleges (Citrus, Cypress, and Santiago Canyon Colleges) to join and participate in the program.

CSUF Edison Scholarship

The Edison Scholarship was established to increase scholarship opportunities for students in the Southern California Edison service area and is administered by CSUF University Scholars and Scholarship Program Office. The scholarship is directed to community college transfer students majoring in Science, Technology, Engineering and Mathematics, (STEM). Each recipient will receive a one-year $3,000 award for the 2014-2015 academic school year.

Of the 15 students receiving the scholarship, 9 have participated in one or more (STEM)² programs – Summer Research Experience (SRE), Academic Transition Program (ATP), Peer Mentor (PM).

Congratulations to this year’s awardees:

1. Adrian Iniguez - (STEM)²
2. Angel Perez
3. Bastian Awischus
4. Brittney Lauren Rangel - (STEM)²
5. Cameron Winston Walters
6. Emilio J. Murga - (STEM)²
7. Erwin Garcia
8. Haroon Khan - (STEM)²
9. Irvin Medina - (STEM)²
10. Leslie Montoya - (STEM)²
11. Luis Marquez - (STEM)²
12. Matthew Cameron - (STEM)²
13. Micah James Madru
14. Sebastian Baltazar
15. Stacy Schkoda - (STEM)²
REU Tips for Success

By Isaac Magallenes, Geology Major, Peer Mentor

Research Experiences for Undergraduates (REU’s) are great opportunities for students to gain knowledge and familiarity with research at a professional level. There are numerous organizations that offer these experiences to undergraduate students across a wide variety of fields. Every REU requires an application process that usually involves an online application form that is to be submitted along with a personal statement and recommendation letters. Many REU’s can be very competitive, with hundreds of students applying for a limited amount of spots, which makes the submission of a strong application very important. Here are some tips on how to make your REU application stronger and increase the chances of acceptance:

1. Begin the process early!
   - Contact the program
   - Know the requirements needed for application submission and the deadlines of submission
2. Seek assistance
   - Faculty and staff can help strengthen application – don’t be afraid to ask for help
3. Give yourself plenty of time to write your personal statement!
   - Use an attention grabbing lead
   - Provide concrete examples
   - Be clear, concise, and direct
   - EDIT AND REVISE!
4. Provide a strong recommendation letter
   - Find someone who can provide relevant details about your academic strengths (i.e. an advisor, mentor etc.)
   - Provide details about the REU and application to your writer
   - Give your writer plenty of time to write your letter
5. Proofread your application!

Because the application process for REU’s can be difficult and strenuous, it is important to stay organized and punctual. Follow these steps to ensure a strong application to increase the chances of acceptance!

For more information and resources please visit our website:
http://stem2.fullerton.edu/summer-research-experience/summer-research-prep/

Other Data News:

(STEM)² Transfer Resource Center has seen a 63% increase of usage from year 2 to year 3 of the grant. In both years, over 90% of students utilizing the Center were upperclassmen (Junior standing and above).

Early Warning System (EWS) coordinated by (STEM)² advised 35% more students (students seen of those flagged) in Fall 2014 in comparison to Fall 2013.

Enrollment to CSUF in the STEM majors from our 3 grant partner community colleges increased 31% from Fall 2013 to Fall 2014.

In Summer Research Experience (SRE) 2013 and 2014 cohorts, over 50% the participants were from underrepresented minority populations. While in year 3 of the grant, approximately 57% of the Academic Transition Program (ATP) participants were from underrepresented minority populations.
I had the privilege of accompanying two Summer Research Experience participants, Valeria Gonzalez from Cypress College and Robert Gudino from Citrus College (now at Cal State Fullerton), to the 2014 SACNAS National Conference held in the Los Angeles Convention Center from October 16 – 18. The SACNAS (Society for Advancement of Chicanos and Native Americans in Science) Conference is intended to motivate, inspire, and engage undergraduate and graduate students to achieve their goals in pursuing education and careers in STEM fields. The conference program is tailored specifically to support undergraduate and graduate students. The workshops and sessions provided an array of information to participants, from applying to graduate school and research fellowships to the latest research in STEM. Below is a recap on how the students experienced the conference.

Valeria Gonzalez, Engineering major, Cypress College - If I had to sum up the conference in one word it would be motivational. I would strongly encourage students to participate in organizations such as SACNAS because it provides a support network we all need in the pursuit of our educational goals. Every person I encountered at the SACNAS conference was very friendly and helpful. Whether it was professionals, professors, or graduate students, everyone was happy to offer advice based on their experiences. It felt as if we were all there to help and motivate one another. Throughout the conference, one thing that resonated with me is that there is no specific way in achieving your goals. As one professor put it, study what you are passionate about now, make sure you’re good at it, and then see where you want to go next. It’s okay to change your mind. The information I gained was invaluable.

Robert Gudino, Math major, CSUF - My experience at the SACNAS conference was amazing. The workshops provided insightful information (from the latest research topics in science to tips on successfully applying to graduate school). The keynote speakers not only spoke about their research, but also gave us examples of their successes and failures. A central part of the conference was networking; we had a chance to network with other students, faculty members, and administrators. Being part of this experience has motivated me to seek more opportunities on and off campus and to get excited about the future. While in school, we are often focused on textbook knowledge and doing well on tests, so having someone to remind us how the hard work is going to pay off at the end is rejuvenating. I hope to maintain contact with those I had the privilege of meeting, and hopefully we can collaborate on projects at some point in the future.
The annual Southern California Conference for Undergraduate Research (SCCUR) was held Saturday, November 22 at California State University, Fullerton. The conference provides undergraduate students a forum to present their research across disciplines. Twenty-two students participated in this past Summer Research Experience (SRE), used SCCUR as platform to present their work, the very work many continued following the end of summer. In addition to SRE students, a number of Peer Mentors and Academic Transition Program students presented their work at the annual conference. Congratulations to all the students who presented their work.

Sally Abdallah
Julio Alvarez
Michael Balesteri
Andre Bilog
Devon Cook
Ray Dilbeck
Jacqueline Ellis
Alejandra Garcia
Brandon Gentile
Davan Heark
Brittany Kastens
Haroon Khan
Jeff Lopez
Cynde Mercado
Erik Muniz
Ly Nguyen
Alexandra San Pablo
Stacy Schkoda
Joshua Silva
Rick Torres
Christina Tran

(STEM)² would like to thank Cynde Mercado, Peer Mentor at Santiago Canyon College, Louis Needleman, and Jazmine Titular, both Peer Mentors at Cypress College, for their work and dedication to mentoring (STEM)² students. All three will be pursuing other ventures in order to advance their academic and professional careers. Cynde will be an intern at the Center for Sustainability at CSUF; Louis will be volunteering at medical centers and shadowing doctors as he prepares for medical school applications; and Jazmine will be taking on more rigorous courses as preparation for graduation and graduate school.

We wish them the best.
California State University, Fullerton (CSUF), a four-year comprehensive university and Hispanic-Serving Institution (HSI), in addition to three of its feeder community colleges, Citrus, Cypress and Santiago Canyon, also HSIs, have all created “(STEM)² - Strengthening Transfer Education & Matriculation in STEM”, a multifaceted project funded by the U.S. Department of Education.

This five-year grant project, awarded in October 2011, is designed to encourage Science, Technology, Engineering, Math (STEM) degrees, retain students in STEM fields, produce more community college STEM transfers to four-year institutions and ultimately, increase the number of Hispanic/Latino and low-income students attaining STEM baccalaureates.

**Cal State Fullerton**
- Dr. Maria V. Dela Cruz, (STEM)² Project Director
- Felipe Salazar, M.A., (STEM)² Mentor/Outreach Coordinator
- Sam Barrozo, B.S., (STEM)² Academic Transition Coordinator
- Diana Serna, B.A., (STEM)² Administrative Assistant
- Zack Newman, B.S., (STEM)² Digital Media Support

**Citrus College**
- Dr. Marianne Smith, Principal Investigator/Project Director
- Alejandra Gonzalez, Coordinator
- Debbie Boudreau, Counselor
- Dr. My Chau, SI Coordinator
- Erica Puhawan, SI Facilitator

**Cypress College**
- Dr. Richard Fee, Principal Investigator/Dean of Science Engineering and Math
- Yanet Garcia, (STEM)² Program Director/Counselor
- Veronica Del Campo, SI Coordinator
- Rama Nashawati, SI Coordinator

**Santiago Canyon College**
- Ruth Babeshoff, Principal Investigator/Dean, Counseling & Student Support Services
- Dr. Jennifer Coto, Coordinator/Chair of Counseling
- Dr. Phillip Crabill, Counselor
- Laney Wright, SI Coordinator

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**Mission Statement and Program Staff**

(STEM)² funded by the Dept. of Education (Grant# P031C110116-12)