

El Camino College

MESA | SSS-STEM

Newsletter

Over a Decade Preparing for Student Success in
Mathematics, Engineering and Science



Congratulations Fall 2011 Transfers

Student Success Stories & Much More Inside

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Congratulations Engineering Transfers!

Congratulations to our engineering transfer students! These students maintained a competitive GPA and active participation in our programs. The average competitive GPA for engineering majors at a four-year institution is typically a 3.5 GPA or above.

Name	Major	University
Mario Cabrera	Aerospace Engineering	Cal Poly Pomona
Taylor Hoff	Aerospace Engineering	CSU Long Beach
Brett Lopez	Aerospace Engineering	UCLA
Ernesto Sosa	Bioengineering	UC Irvine
Paul Hiney	Civil Engineering	CSU Long Beach
Diego Bautista	Civil Engineering	UC Irvine
Alex Sanchez	Construction Engineering Management	CSU Long Beach
Alexandra Button-Golic	Electrical Engineering	USC
Daniel E. Hernandez	Electronic & Computer Engineering	Cal Poly Pomona
Kimberly Harry	Industrial Engineering	Cal Poly SLO
Javier Molina	Industrial Engineering	Cal Poly Pomona
Garcel Zardes	Mechanical Engineering	Cal Poly Pomona
Rolando Navarrete	Mechanical Engineering	CSU Long Beach
Heriberto Ortiz	Mechanical Engineering	CSU Long Beach
Naoya Matsuda	Mechanical Engineering	UC Irvine
Yuki Yagi	Mechanical Engineering	UC Irvine
David Walter	Mechanical Engineering	UCLA

**MESA|SSS-STEM
STUDENT HIGHLIGHTS**



Brett T. Lopez
AS in Mathematics
UCLA Transfer



Sahar Tashakor
AS in Biology & Chemistry
UCLA Transfer



Mario Cabrera
AS in Pre-Engineering/AA General Studies-
Biological & Physical Science
Cal Poly Pomona Transfer

Congratulations Mathematics and Science Transfers!

Congratulations to our mathematics and science transfer students! These students maintained a competitive GPA and active participation in our programs. The average competitive GPA to a four-year institution for math and science students is typically a 3.0 or above (higher for impacted majors).

Name	Major	University
Johanna Zamora	Applied Math	Cal Poly Pomona
Huijing Gong	Applied Math	UC Berkeley
Jonathan Kim	Applied Math	UC Berkeley
Gabriela Lopez	Biology	Loyola Marymount University
Dania Jaradat	Biology	CSU Los Angeles
Richard Flor	Biochemistry	USC
Anh Tran	Biochemistry	UCLA
Justin Seifert	Biochemistry	UCLA
Mai Pham	Biochemistry	CSU Long Beach
Man Duong	Biochemistry	CSU Long Beach
Zuelen Roblero	Biological Sciences	UC Riverside
Reymarie Calazan	Computer Science	CSU Dominguez Hills
Chynna Velasco	Computer Science	UC Irvine
Austin Cathey	Computer Science	UC Irvine
Caesar Ancayan	Geology	UCLA
Van Custodio	Informatics	UC Irvine
Andrea Danihel	Marine Biology	CSU Long Beach
Teresa Nieves	Mathematics	CSU Long Beach
Sachie Wimalarathna	Microbiology	CSU Long Beach
Noor Bala	Microbiology	UCLA
Sahar Tashakor	Microbiology	UCLA
Sarah Maasarani	Molecular Biology	UC Berkeley
Alexis Kwok	Molecular Biology	UCLA
Manami Kawakita	Molecular Biology	UCLA
Sumayyah Khan	Molecular Biology	UC San Diego
Joan Ngwuta	Molecular & Cell Biology	UC Berkeley
Sidikat Giwa	Nursing	UCLA
Christopher Johnson	Physics	UCLA
Jonathan Creencia	Pre-Med	UCLA
Karen Hung	Undecided	UC San Diego

Introducing the Student Support Services for Science, Technology, Engineering, and Mathematics (SSS-STEM) Program

In Fall 2010, El Camino College (ECC) was awarded the Student Support Services for Science, Technology, Engineering and Mathematics (SSS-STEM) grant funded by the U.S. Department of Education. The purpose of ECC SSS-STEM is to provide academic and other support services to low-income, first-generation or disabled college students to increase students' retention and graduation rates, facilitate their transfer from two-year to four-year colleges, and foster an institutional climate supportive of their success.

In alliance with the ECC Mathematics, Engineering, and Science Achievement (MESA) Program, SSS-STEM provides additional services and resources to enhance what is already offered by MESA to help reinforce and broaden the communication, leadership, and networking opportunities available for STEM students. MESA has created a community of learners within STEM and SSS-STEM reinforces these efforts with additional staff support. The additional staff provides counseling and academic support, personal and professional development, financial literacy, and transfer readiness activities and services.

SSS-STEM along with MESA will continue to bring new and exciting opportunities such as the NSF S-STEM scholarship program to help students overcome many of their academic as well as financial challenges in their pursuit of a STEM career.

SSS-STEM General Requirements

- ◆ U.S. Citizens or Permanent Residents.
- ◆ Low-income (*determined by U.S. federal guidelines*), and/or first generation.
- ◆ Declare a mathematics, engineering, or science based major.
- ◆ Plan to transfer with an AA/AS degree or certificate.
- ◆ Demonstrate academic need.
- ◆ Be enrolled in a math or science class every semester.



SSS-STEM Team

SSS-STEM Director

Arturo Hernandez

SSS-STEM Program Coordinator

Elizabeth Bermudez

SSS-STEM Administrative Assistant

Ann Libadisos

SSS-STEM Project Specialist

Moises Gutierrez

SSS-STEM Counselor

Daissa Lee



(left to right) MESA|SSS-STEM Team Daissa Lee, Dennise Lopez, Moises Gutierrez, Ann Libadisos, Elizabeth Bermudez, and Kenneth Key.

El Camino College National Science Foundation Achievement Scholarship in Engineering, Mathematics and Sciences

The El Camino College National Science Foundation Achievement in Science, Engineering, and Mathematics Scholarship (ECC-NSF ASEMS) is a newly funded, five-year grant, sponsored by the National Science Foundation. ECC-NSF ASEMS supports scholarships for academically talented, financially needy students, enabling them to enter the workforce following completion of a baccalaureate or graduate degree in fields of science, technology, engineering, or mathematics. This program emphasizes the importance of recruiting students to science and engineering disciplines, while mentoring and supporting students through degree completion.



2011-2012 ECC-NSF ASEMS Awardees

On average, this grant will award more than \$105,000 in scholarship aid to about 25 students per year. ECC-NSF ASEMS offers three distinct opportunities labeled as Tier 1 for students who are two years away from transferring, Tier 2 for students who are one year away from transferring, and the Transfer Award for transfer-ready students. The ECC-NSF ASEMS project is under the direction of Jeff Cohen, professor of mathematics, and Arturo Hernandez, MESA|SSS-STEM director.

During the first year, 20 students have been awarded a total of \$52,000 and for the next four years, 25 students will be awarded a total of \$118,000 per year. ECC-NSF ASEMS will continue to offer scholarship opportunities in the Spring 2012, including five Tier 1 at \$4,000; 14 Tier 2 at \$2,000, and six Transfer Awards at \$7,000. ECC-NSF ASEMS particularly considers student progress toward transferring and active participation through active membership in MESA|SSS-STEM|ASEM programs.

Jeff Cohen, Arturo Hernandez and our students greatly appreciate the participation of Teresa Palos, Susana Prieto, Susan Taylor and Lars Kjeseth in the NSF ASEMS scholarship committee as well as Janice Ely, Tom Connolly, Hortense Cooper, Taylor Robbins, Katie Gleason, Diana Stanojevich, Josie Cheung, Sophie Dao, Charlene Sakatani, Sharon Filio, Martha Burgess, Kim Legier and Kahea Kamahale for facilitating the processing of these awards.

ECC-NSF ASEMS 2011-2012 Awardees

Fall '11 & Spring '12 Tier 2	Spring 2012 Tier 1	Spring 2012 Tier 2	
Adriana Hernandez \$4,000	Freddy Cisneros \$2,000	Rebekka Asher \$2,000	Sebastian Potes \$2,000
John Twedt \$4,000	Joynaline Hart \$2,000	Sofia Abune \$2,000	Shahriar Shokouh Aghaei \$2,000
Steffen Paiva \$4,000	Elias Macias \$2,000	Heather Conrow \$2,000	Omair Tariq \$2,000
Keony Young \$4,000	Roman Serna \$2,000	Mohammad Pezeshki \$2,000	Sesar Salasar \$2,000
Vito Iaia \$4,000	Ana Valdivia \$2,000		
Zachary Smith \$4,000	Stephen Wilson \$2,000		

MESA National Science Foundation Scholarship

The MESA National Science Foundation (MESA|NSF) scholarship is a statewide effort that supports low-income, under-represented and educationally disadvantaged students pursuing math, engineering, or computer science degrees. Scholarships are awarded to Rising Sophomore (students one year away from transferring) or Transfer-Ready (students ready to transfer for fall) MESA students who have maintained strong academic performance and active participation in MESA and their community. To date, the MESA|NSF award has been awarded to 39 ECC MESA students, totaling \$437,500. This year's award was very competitive, and we congratulate our three selected ECC MESA winners!

RISING SOPHOMORE

Gilberto Hernandez Mechanical Engineering \$12,500

TRANSFER READY

Brett Lopez Aerospace Engineering \$10,500

Mario Cabrera Aerospace Engineering \$10,500



(left to right) Mario Cabrera, Arturo Hernandez, and Brett Lopez at the Math & Science Awards Ceremony.



“Receiving the MESA|NSF Scholarship was the biggest achievement I have obtained for all of my hard work and dedication so far. I was both grateful and speechless. Thanks to everyone in MESA for their support and family-like environment, and the staff for believing that students can achieve great things if they put forward the effort and time to apply to opportunities that can give them one less thing to worry about.”

- Gilberto Hernandez

Shadowing an Engineer at Northrop Grumman

A select group of engineering students from our MESA|SSS-STEM Programs had the opportunity to spend a day with the engineers at Northrop Grumman last February 2011. Among the attendees was Roman Serna, a mechanical engineering major, who is also the President of the Society of Hispanic Professional Engineers chapter at El Camino College.



“My trip to Northrop Grumman gave me a great insight into the life of engineers for a day. Our small group toured the facility and met engineers from all fields. One of the most impressive things to see was how engineers networked and collaborated with each other for a given project. Another highlight of the trip was being able to take a peek at the various projects that were currently being developed, which included satellites and computer software material. Sometimes the materials of a given project can be so sensitive that if you touch it without permission it can be extremely expensive or time consuming to repair. The engineers at Northrop Grumman were excellent hosts and provided information on all the potential employment opportunities at this company. Sometimes it feels surreal when you think about big companies like Northrop Grumman and it makes it hard to realistically picture yourself working there. However, through opportunities like the Shadow an Engineer Day I realized that everyone who I met at Northrop Grumman was very real, down to earth, and that I could easily relate to.”

-Roman Serna

El Camino College Scholarship Recipients

The El Camino College Foundation has awarded the following MESA|SSS-STEM|ASEM students with various scholarship awards and recognitions. Join us as we celebrate the scholastic achievement of our students and their determination to seek opportunities that can help them financially support their academic goals at ECC.

Adriana Hernandez	Wallace and Jeanne Jones Scholarship	\$1,000
Aigbe Woghiren	Osher Foundation Scholarship	\$1,000
Amilcar Lara	Foundation Donors Award	\$500
Anne Kelley	Osher Foundation Scholarship	\$1,000
Anh Tran	Verizon Scholarship	\$1,000
Dalal Budri	Corona Del Camino Scholarship	\$300
Daniel Hernandez	ECC Alumni Scholarship (Vocational)	\$750
Gilberto Hernandez	Virginia and Thomas Riddle Scholarship	\$2,000
Heather Conrow	Osher Foundation Scholarship	\$1,000
Heriberto Ortiz	Frank Ego Memorial Scholarship	\$500
Jacob Delgado	Darryl and Adrienne Brown Scholarship	\$1,000
Jacob Delgado	Osher Foundation Scholarship	\$1,000
Javier Molina	Norm Verry Athletic Endowment	\$1,250
John Twedt	Foundation Donors Award	\$500
John Twedt	Ralph and Jean Jenkins Memorial Scholarship	\$500
Joseph Montes	Foundation Benefactors Award	\$1,000
Joseph Uranga	Foundation Scholars Award	\$1,000
Joyaline Hart	Two-year Foundation Board of Directors Award of Excellence	\$4,000
Kimberly Harry	Osher Foundation Scholarship	\$1,000
Mario Cabrera	Louis and Susan Garcia Memorial Scholarship	\$1,000
Michael Espino	Foundation Donors Award	\$500
Michael Parra	Edison International Green Jobs Education Initiative	\$2,000
Michael Rappuhn	Ralph and Jean Jenkins Memorial Scholarship	\$1,000
Mohammad Pezeshki	Margaret and Phillip Pelland Scholarship	\$2,000
Rebekka Asher	Virginia and Thomas Riddle Scholarship	\$2,000
Sahar Tashakor	Kinder Morgan Women in Industry and Technology	\$1,000
Sandy Cerna	Foundation Scholars Award	\$1,000
Sofia Abune	Virginia and Thomas Riddle Scholarship	\$2,000
Steffen Paiva	Foundation Scholars Award	\$1,000
Teri Jordan	Edison International Green Jobs Education Initiative	\$2,000
Trayvon Stinnett	Edison International Green Jobs Education Initiative	\$1,000
Van Custodio	Foundation Donors Award	\$500
Yamil Flores	Southern California Edison Scholarship	\$1,000
Zachary Smith	Foundation Donors Award	\$500



(left to right) Mario Cabrera, Mohammad Pezeshki, Gilberto Hernandez, Steffen Paiva, Amilcar Lara, and Arturo Hernandez.



(left to right) Adriana Hernandez, Heather Conrow, and Yamil Flores.

Internships & Summer Enrichment Programs

Research experience is a very important part of the math, engineering, and science student experience. Students have the opportunity to train under a mentor and gain invaluable lab experience that can help generate competitive transfer and internship applicants. This year, several students were directly involved in research programs in their field, while others participated in internships that focused on personal and professional development as well as community service. The largest project has been the MESA California Connects Internship Program with over 100 participating students. For more information about California Connects, please see pages 12 and 13. MESA|SSS-STEM congratulates these students for their initiative in enhancing their educational goals with hands-on research and/or community service.

Daniel Cazares - UCLA CEED RISE-UP

Andrea Flores - Math & Science Teacher Initiative

Jennifer Sanchez - Roundhouse Aquarium Aquarist Internship

John Twedt - JPLUS Award

Aigbe Woghiren - Clinical Care Medical Center, St. Francis Medical Center.

Brett Lopez - NASA NCAS Program

Vito Iaia - NASA NCAS Program

Kendrick Roberson - NASA NCAS Program

Joan Ngwuta - National Institutes of Health Community College Summer Enrichment Program, Baltimore, Maryland

NASA National Community College Aerospace Scholars Program

The NASA-sponsored National Community College Aerospace Scholars (NCAS) Program is a nation-wide competitive educational program that enhances student knowledge and experience working with NASA projects. Students learn how to organize projects through practice on abstract, proposal, and budget and timeline development among other skill-building activities. Students participate in twenty hours of pre-work through interactive Web-based activities and online interaction with participants and NASA engineers. Students that successfully complete the pre-work stage are invited to an on-site experience at NASA where they will participate in exploration team projects, networking with engineers, scientists, and/or astronaut briefings, and also have the opportunity to tour the NASA facility.

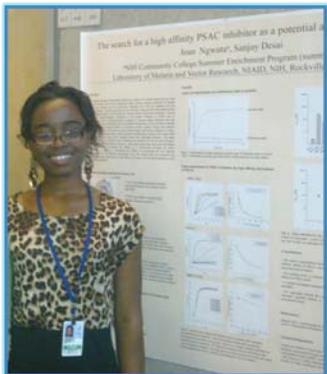
Our first MESA student participant was Mario Cabrera who had the opportunity to tour the Johnson Space Center in Houston, Texas in Spring 2010; Mario is currently pursuing aerospace engineering at Cal Poly Pomona. Last Fall 2010, three El Camino College MESA students were flown to two NASA facilities after successfully completing their Web-based project. Vito Iaia was flown to the Johnson Space Center in Houston, Texas; Brett Lopez and Kendrick Roberson were both flown to the Marshall Space Flight Center in Huntsville, Alabama. Brett Lopez is now at UCLA pursuing aerospace engineering and Vito Iaia and Kendrick Roberson are continuing ECC students.



(left to right) Fall 2010 NASA NCAS participants Brett Lopez, Vito Iaia, Kendrick Roberson.

Now that four ECC MESA students have already participated in the NASA NCAS Program, our STEM community is highly encouraged to apply for this excellent internship experience. Interested students must be U.S. Citizens, at least 18 years old and a high school graduate, be registered community college students, be able to commit to a six month relationship with NASA, and have access to the internet to complete interactive projects..

National Institutes of Health (NIH) Community College Summer Enrichment Program



Joan Ngwuta joined MESA in November 2008 and SSS-STEM in September 2010 as a biochemistry major. As an active student she worked as a facilitator for the MESA Academic Excellence Workshops for beginning chemistry. Previously, Joan participated in the CSULA Research Experience for Undergraduates opportunity under the Department of Chemistry where she conducted research in environmental toxicity within the aquatic community. She quickly trained herself to apply to multiple research programs for the summer and successfully gained acceptance to the National Institutes of Health (NIH) Community College Summer Enrichment Program in Baltimore, Maryland. She is currently attending UC Berkeley under the Molecular & Cell Biology program.

“This past summer, I interned at one of the Laboratories of Malaria and Vector Research at NIAID, NIH under direct supervision of a post-doctoral researcher and a principal investigator. It is known that the malaria parasite *Plasmodium falciparum* which invades the human erythrocyte has developed resistance to the popular “chloroquin” and some other drugs used as an anti-malarial; I am a witness to this because I had malaria on several occasions while in Nigeria. My lab had discovered that the parasites use the Plasmodium Surface Anion Channel (PSAC) for nutrient uptake from the blood plasma. To fight malaria, there has to be an inhibitor of this channel and my project this summer was to verify that indeed this channel was present and test the effect of structural alterations of functional groups on an already determined potent inhibitor to see if a stronger drug would emerge. The goal was to come up with something cheap and readily available to the developing world that does not have harmful side effects, and that would be very effective in extremely small amounts to prevent swallowing of large tablets. I grew and maintained cell cultures of a particular parasite strain for all my experiments under standard conditions, performed lysis assays, and worked with 12 drugs, 11 of which were derivatives, for seven weeks.

On a few occasions I got frustrating results, stayed late nights and worked on weekends, but the most important thing is that I finished my assigned project. This internship was competitive according to the coordinators and I noticed that almost all the participants were from Maryland. Though the distance and expenses involved are intimidating factors I am glad to have had this experience. Not only will it be on my resume, but I also met good friends, mentors and important personalities in and out of lab. I attended scientific seminars and presentations, an NIH-organized graduate and professional school fair, and even visited the White House along with my fellow internees. On August 4, I was one of the hundreds who presented posters at the NIH Poster Day. I thank MESA|SSS-STEM for all the support and highly encourage MESA students to take advantage of internship opportunities available.” - *Joan Ngwuta*

NASA NCAS Program Participant Experience

“Once I was flown to visit NASA’s Marshall Space Flight Center in Huntsville, Alabama, which specializes in launch vehicles, I knew this was where I wanted to be. The tours consisted of analyzing the various types of rockets used for launching payloads from Earth’s surface to outer space. NASA staff also presented on information about new forms of rocket propulsion, maximizing cost efficiency through large-scale models, and the importance of a hazard-free work environment through computer-generated simulations.

The experience at Marshall allowed me to see the vast amount of opportunities that are associated with a major in engineering. I also gained insight on how interconnected the business and engineering world are; this is something most engineering students do not see until they are employed. Working with the engineers at NASA really inspired me to pursue more than just an undergraduate degree in aerospace engineering.” - *Brett Lopez*

UCLA Research Intensive Series in Engineering for Underrepresented Populations (RISE-UP) Program



The UCLA Center for Excellence in Engineering Diversity (CEED) offered a Research Intensive Series in Engineering for Underrepresented Populations (RISE-UP) opportunity to conduct research in a selected area this past Summer 2011. Daniel Cazares (picture at left), a computer science major, joined MESA and SSS-STEM in Winter 2011. He was selected to participate in the RISE-UP Program where he worked closely with UCLA professors and graduate students under a project titled “Real-Time Guidance for Critical Situations.”

“I worked on a project titled “Real-Time Guidance for Critical Situations.” This research explores potential ways to create a sophisticated real-time information system, which relays information from one agent to a collective and back out to other agents in a critical situation for the purpose of allowing critical time-sensitive coordination of agents.

The summer RISE-UP research program was a great learning experience for me. It taught me a great deal about how to conduct a critical research project while also learning how to work with teammates with different learning styles and responsibilities. Since I added late onto my project, I was forced to quickly learn the software and come up to speed to what exactly was happening on the project. One of my team members was very capable; he demonstrated tenacity and fervor for his field. However, the other teammate seemed more difficult to contact. However, this taught me how to work with both types of people, and this is something I will keep in mind for future research endeavors. Despite these hurdles, the program instilled a great deal of knowledge and experience for me. I learned a great deal of technical skills; more computer science knowledge is never a bad thing. I was taught how to use the Unity 3D engine and gained a great deal more knowledge of C#. In addition, a subtle but very important piece of knowledge is proper use of terminology. Communication with team members and graduate students requires certain knowledge about scientific terms, which I was not accustomed to using.

The program will open many doors for me. I will be able to look for more research opportunities and my resume will start to display an interest in working on projects at the UC level. The RISE-UP research program was an enlightening experience despite its pilot status, and I hope it will be continued for the benefit of future students.”- *Daniel Cazares*

Roundhouse Aquarium Aquarist Internship

Jennifer Sanchez (picture at right) joined MESA and SSS-STEM in Spring 2011 as a biology major. In her interest of being an active student, she applied and was accepted to a Roundhouse Aquarium internship in Manhattan Beach, California for Summer 2011.



“As a general biology major I want to be able to expose myself to all the varying fields of biology. In Summer 2011, I was accepted as a Roundhouse Aquarium aquarist. This internship gave me the opportunity to get hands-on experience on all the different components that are required to maintain a successful aquarium. During my shifts, my responsibilities included scrubbing tanks where the marine life was kept and make a special note to check the pH, nitrates, nitrites, and ammonia levels consistently. While these may seem simple tasks, the responsibility is enormous. If the temperature of the water in the tank where the fish were kept was one degree higher or lower than it was supposed to, the fish run a high risk of dying.

Working at the Roundhouse Aquarium helped me learn how important and volatile marine life can really be and how all the work done is interconnected to ensure the safety of the marine life and therefore a successful aquarium the public can visit. There is a significant amount of work needed to run an aquarium, but if you are not afraid to get your hands dirty and do some serious work the payback of being able to marvel at all the marine life available is definitely worth the effort.”

-*Jennifer Sanchez*

MESA|SSS-STEM Student Experience

“For serious STEM majors at El Camino College there is no better resource than the MESA|SSS-STEM Center. When I first started at ECC in the Fall of 2009, I was barely entertaining the idea of getting my associate degree in six years. After joining MESA and SSS-STEM a little over a year ago, my career as a student has skyrocketed. Now I run good odds of transferring to one of the most impacted majors in one of the highest-ranked universities in the entire world. MESA|SSS-STEM sometimes makes you feel as if you are part of something that will eventually be made into a movie; “Stand and Deliver” had nothing on this. Every day, I see transformation in students: slumped shoulders straighten, shuffles evolve into strides, and meekness gives way to the confidence that only knowledge can bring.



Not a shred of effort is spared by the MESA|SSS-STEM staff on behalf of the students. I see many of them in there for hours on end, working on new programs, projects, workshops, and more every day. In many ways, it is run like a well-oiled machine that takes raw materials and spits out a polished gem—in this case, the product is desirable, assured transfer-ready students. There is something to be said about being in an environment where academic achievement is the highest form of currency one can hold. As a younger man, I often found myself in an environment where scholastic acumen was something to be hidden and ashamed of. In MESA|SSS-STEM, that trait is not only condoned—it is cultivated, groomed, and revered.

All of the students in MESA|SSS-STEM face their own unique challenges—mine are no less daunting than most. I commute more than 100 miles every weekend from my parent’s house in the High Desert via public transportation—my father suffers from Gulf War Syndrome, and my mother is diminutive, so I help with the heavier chores. In all, I lose nearly 30 hours weekly to bus and train. When in the South Bay, my home is a half-century old sailboat that I had purchased a few years back. As a displaced worker and an older re-entry student, I have faced daunting financial and logistical challenges—but every time I felt that noose begin to tighten, MESA|SSS-STEM has done everything to ensure that it was removed.

As a major in systems software engineering, access to a computer and the Internet are absolutely critical. Through the MESA California Connects Program, I was able to earn a powerful laptop and specialized training in return for providing community service to the disadvantaged. Recently, I was awarded a prestigious NSF Scholarship, which I would not have even applied for had I not been encouraged and directed to by the MESA|SSS-STEM staff. It has provided me with the means to get by in a semester that might otherwise have broken my back.

Besides financial assistance, MESA|SSS-STEM has groomed me into a desirable transfer candidate as well. Through it, I was elected to become one of the first leaders of El Camino College’s Space Balloon Research Academy—a remarkable opportunity, as there is a dearth of research projects available to community college students. Arturo Hernandez (our MESA|SSS-STEM director, who has been with me from day one), took special note of my dedication to the project and nominated me for the JPLUS Scholar program. The JPLUS program has provided me with inroads and training into some of the research projects afforded to undergraduate students—specifically, the SURF internships. I have attended lectures at Caltech throughout the summertime, as well as conferences sponsored by the Southern California Conference of Undergraduate Research (SCCUR). This has given me insight on how to apply for the coveted SURF internships at Caltech next year—I intend to propose research that should vastly streamline rescue efforts in the event of a catastrophic earthquake, ultimately saving lives.

This is just a sampling of the ways that MESA|SSS-STEM has helped me. Make no mistake—MESA|SSS-STEM is not a charity; rather, it is a boot-camp for dreamers, a forge by which those with the temerity to hope are given the tools to bring those dreams to reality. If you are one who is willing, then through MESA|SSS-STEM you will become able.”

- *John Tuedt*

California Connects with El Camino College MESA Students

The U.S. Department of Commerce Technologies Opportunity Program (BTOP), in collaboration with the Foundation for Community Colleges, created a program called California Connects. California Connects is designed as a three-year program that is working alongside MESA statewide programs to recruit Digital Literacy Community Outreach Interns who will assist in the national movement to elevate access to digital literacy skills through hands-on, personalized training. California Connects supplies laptops equipped with the necessary tools and programs to help advance digital literacy, assist interns with the Microsoft certification training, and to help facilitate the community service requirement.

At El Camino College, the MESA California Connects Internship Program is recruiting MESA students who are committed to accomplishing their goals at ECC in a math, engineering, or science-based major and have shown academic progress towards transferring. The MESA California Connects Internship Program requires at least a 30 hour commitment to complete a digital resources training, an on-line Microsoft certification course (Word, Powerpoint, Excel, and/or Access 2010), and 12 hours of community-based service work; students earn a personal laptop after completing the program. Our first 2010-2011 cohort consists of over 100 participating students who have already spent over 1,000 hours training over 550 community members on the many benefits of using computers and the internet. Some of these benefits include securely paying bills online to avoid fees, saving money on shopping, researching employment opportunities, and communicating with family and friends across the globe through the use of various popular online services like Facebook and Skype. As this first cohort completes their contract requirements they would have compiled a minimum of over 1,300 hours of training and worked with over 750 people.

The MESA California Connects Internship Program is now in its second year of service for 2011-2012. It continues to recruit eligible students and looks forward to continue enhancing the skills of its students while also serving the community. Check out the “*ECC MESA California Connects*” video available on the California Connects website.

California Connects Highlights

- ◆ Contributes Broadband Access to Underserved Communities
- ◆ Digital Literacy Certification
- ◆ Personal Laptop
- ◆ Microsoft Office Certifications
- ◆ Community Service

ECC MESA California Connects recognizes John Wagstaff, Claudio Vilchis, and Don Treat from the ITS Division for their support and assistance with equipment logistics and Virginia Rapp, Dave Murphy, and Lavonne Plum from the Business Division for their support and assistance with the Microsoft Certification Center.

“Participating in the MESA California Connects program helped me appreciate my knowledge of computers, and made me aware of the need to share this knowledge and experience to help improve the digital gap that is found in our communities.” - Veronica Ixtupe



MESA California Connects Internship Participants

The following MESA students have either completed or are in the process of completing their MESA California Connects Internship Program. Congratulations on this great opportunity!

<p>Lourdes Aguirre Sean Austin Gerardo Barajas Jon Bartolazzi Diego Bautista Pedro Benitez Jasmine Bowman Mario Cabrera Amber Camacho Austin Cathey Daniel Cazares Jacqueline Cely Sandy Cerna Sok Chhay Freddy Cisneros Heather Conrow Araseli Cortez Edwin De Dios Domingo De La Cruz Michelle Douglas Michael Espino Richard Flor Yamil Flores Mackenzie Flowers Gustavo Garcia Israel Garcia Pauline Giron Kimberly Harry Joynaline Hart Adriana Hernandez Daniel Hernandez Gilberto Hernandez Peggy Hodges</p>	<p>Nikita Howard Karen Hung Vito Iaia Veronica Ixtupe Sanim Khan Jessica Landeros Amilcar Lara Brett Lopez Gabriela Lopez Elias Macias Jonathan Martinez Eduardo Mendez Areli Molina Javier Molina Joseph Montes Daniel Montoya Lizbeth Morales Joanne Morales Rey Moreno Daniela Moreno-Lopez To Linh Nguyen Joan Ngwuta Victor Nunez Heriberto Ortiz Henry Osuji Steffen Paiva Michael Parra Domingo Perez Marlon Perez Oscar Perez Giacomo Pescetti Julie Pham Alex Portillo</p>	<p>Christian Quesada Martha Quezada Michael Rappuhn Gael Reyes Hadasa Reyes Victor Rojas Sesar Salasar Shamia Salih Jerardo Sanchez Roman Serna Shahriar Shokouh-Aghaei Ernesto Sosa Andrew Stier Trayvon Stinnett Rachel Stokes Sahar Tashakor Monica Tejeda Khris Thorne Araceli Torres John Twedt Brandon Uy Azucena Valadez Ana Valdivia Elisiva Vanisi Oswaldo Villacreses Eric Webb Stephen Wilson Aigbe Woghiren Keony Young Johanna Zamora Michael Zuniga</p>
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Daniel Hernandez (right) helping a community member learn digital literacy.



Adriana Hernandez (left) helping a community member learn to surf the Web.

MESA|SSS-STEM Director's Message



My experience at El Camino College as a student, math tutor, MESA facilitator, MESA coordinator, and for the past eight years as MESA Director, has given me the opportunity to give back to my community. As an El Camino College alumnus, I am proud to support students who are following the path I took a few years back, particularly through the MESA Program and, now, the SSS-STEM Program.

Since 2002, I have seen our MESA Program grow into a network of opportunities for student success. Support from the Chancellor's Office and Foundation for Community Colleges, the Department of Education and more recently the National Science Foundation assist our efforts to offer academic support, professional development and financial resources to our STEM students. MESA|SSS-STEM along with California Connects and NSF S-STEM help create opportunities that will continue to assist our students in the coming years.

Our MESA|SSS-STEM team, in collaboration with campus administrators, faculty, and staff, will continue to assist our students in making their experiences an exciting journey at El Camino College. I invite students pursuing calculus-based degrees, and who have yet to visit MESA|SSS-STEM Center, to take advantage of the services, resources and opportunities available to support them in their academics and future careers.

Arturo Hernandez, MESA|SSS-STEM Director

Message from the Deans

Dear Students,

Welcome to the MESA|SSS-STEM Center. MESA|SSS-STEM is here to assist you with your math and science classes and help you succeed.

I am constantly amazed at what I see when I walk through the MESA|SSS-STEM Center. It is always filled with students, and everyone is on task. Some people quietly study at a table or computer by themselves, but many people are working in student groups. Many others are gathered around a white board, working out some chemistry, physics or math problem. The intellectual energy in the room is motivating to me. I believe most of you are motivated as well. In fact, when I read the list of students receiving awards, scholarships, internships and other recognitions, I know you are motivated by MESA|SSS-STEM.

El Camino College offers fabulous opportunities in the MESA|SSS-STEM Center. Be sure to take full advantage of all the resources available to you. You won't be disappointed.

I look forward to meeting all of you throughout the year at various functions. Remember, MESA|SSS-STEM is here to help, but you need to take the first step and come visit the center.

Jean Shankweiler
Dean of Natural Sciences



Students in MESA|SSS-STEM:

You have chosen to seek a degree and a professional career in science, mathematics or engineering. The goal of the MESA|SSS-STEM Programs is to provide you with resources to help you succeed, starting now and extending to the future. The center for science, math and engineering students, the book and computer resources, all are for you to enhance your current success and gain skills useful for a lifelong career.

Workshops, counseling, transfer information, financial aid information, career path information, and every other program – all of these are resources for you to help determine the shape of your own success and your own future. Your fellow students and the MESA|SSS-STEM staff provide a place for you to create a community of learners, and this community will help your immediate success and will help you to strengthen your plans for transfer, degrees, jobs, and careers – all in the larger community of science and engineering professionals.

El Camino College is proud to provide the resources for MESA|SSS-STEM students to succeed, and prouder still that so many students use those resources to create success in their own lives.

Don Goldberg
Dean of Mathematical Sciences



Students Recognized at Division Award Ceremony

Congratulations to all of the following MESA|SSS-STEM|ASEM students who were recognized at the Division of Natural Sciences and Mathematical Sciences Academic Awards Ceremony held on Friday, May 27, 2011.

Chemistry

General Chemistry Achievement Awards

Ryan Bauman
John Crossen
Kimberly Harry
Wing Yau Kwok
Kun-Young Lee
Simon Lee
Timothy Linehan
Erick Lopez
Teresa Nieves
Cheuk Man Pun
Anh T. Tran
David Walter

Freshman

Chemistry Award
Teresa Nieves

McQuerry Award for

General Chemistry
Timothy Linehan

General and Organic Chemistry Achievement

Jonathan Creencia
Sarah Maasarani
Mai T. Pham
Zachary Smith

Earth Science Award

*Wally E. Ford Earth
Science Scholarship*

Pauline S. Giron

Astronomy

Commendation for Excellence in Astronomy

Anne Kelley
Heather Quigley

Life Sciences Awards

Commendation for Distinctive Performance

Jonathan Creencia

Excellence in Biological Field Studies

Jeremy Emerson

Distinguished Biology Achievement Award

Jonathan Creencia

General Biology Achievement Award

Ryan Bauman
Jaclyn Kwan

Wing Yau Kwok
Zachary Smith

Computer Science Awards

Commendation for Distinctive Performance

Van Erick Custodio

Presidential Scholars

Mathematical Sciences Division - Brett Lopez

Natural Sciences Division - Nicholas Kotsianas

Mathematics Award

Calculus Awards

Juliet Andrawes
Eric Barba
Mario Cabrera
Kun-Young Lee
Timothy Linehan

Erick Lopez
Corey Nguyen
Layne Sakamoto
Alberto Salinas
Vuong Tran
Huijing Gong
Vito Iaia

Christopher Johnson

Simon Lee
Teresa Nieves
Nijie Takere
David Walter
Brett Lopez
Jonathan Kim

AMATYC Math Contest

Huijing Gong (FA/SP)
Ting Fung Lam (FA/SP)
Mai Pham (FA)
Myungin Kim (FA)

Mathematics Faculty Awards

Brett Lopez
Jonathan Kim

Engineering Awards

Mario Cabrera
Roman Leonelli
Brett Lopez
Naoya Matsuda
Giovanni Menjivar
Teresa Nieves

Physics Awards

Excellence in Physics Award

Mohammad Pezeshki
Mai T. Pham

Commendation for Outstanding

Timothy Linehan

Commendation for Exemplary Performance

Nicholas Kotsianas

Division Academic Awards

Van Custodio
Huijing Gong
Jonathan Kim
Christopher Johnson
Erick Lopez
Alberto Salinas
Nijie Takere
David Walter
Vito Iaia
Wing Yau Kwok
Mai Pham
Hyo Jin Lim
Joan O. Ngwuta

Northern California University Tour

In Spring 2011, thirty math, engineering, and science students had the opportunity to participate in a four-day Northern California Tour specifically organized for STEM students. This tour was designed to visit four main campuses: UC Merced, UC Santa Cruz, UC Berkeley, and UC Davis. Students were taken on a charter bus and received hotel accommodations when needed, but also the opportunity to stay at campus dorms like at UC Berkeley. Upon arrival to each campus, students had the opportunity to attend Admissions and student panel presentations, campus tours, and also free time opportunities to check out particular campus spots or STEM resources.



UC Berkeley Tour Spring 2011

This activity helps students visualize and experience their potential transfer campuses. Through this experience students gain a better understanding of the campus atmosphere throughout each



UC Santa Cruz Tour Spring 2011

particular campus, the resources available, and whether a campus will be the right choice for them. The opportunity to visit former alumni also helps students gain a grasp of the transition from El Camino College to a four-year university and the ability for these students to adjust to the different work load and environment..

The Northern California Tour was made possible through the support of the STEM grant, and the ECC Transfer Center. Special thanks to Sue Oda Omori and Blanca Prado, ECC Transfer Center staff, for coordinating this activity and ensuring that our STEM students had a great experience during the tour.

Leadership Development

A significant activity for STEM students is leadership development. This year, from April 15 through April 17, 2011, nine El Camino College MESA|SSS-STEM students along with several other students from community college MESA Programs across the state attended the MESA Leadership Retreat hosted at the Happy Valley Conference Center in Santa Cruz, California.

Through this leadership development activity students get the opportunity to get out of the city environment and spend a weekend networking with other students through participation in academic and skill-building activities. Students had the option to participate in field study projects including Engineering Design, a Mystery Spot that defies the laws of physics, Bio/Chemistry Study, and Orienteering. Additionally to these academic workshops, the MESA Leadership Retreat provides students with guest speaker sessions that include discussion topics like what students can gain from being active in national organizations like SACNAS. This year students had the special privilege to attend a session with NASA employees who took the time to visit and share their own academic experiences and struggles and how these all ultimately contributed to acquiring an employment/internship opportunity with NASA that has changed their lives.



(left to right) MESA|SSS-STEM students Araceli Meyn, Adriana Hernandez, Araseli Cortez, Daniel Cazares, Michael Parra, Roman Serna, Mackenzie Flowers, Khris Thorne, and Oswaldo Villacreses at the Happy Valley Conference Center in Spring 2011.

MESA|SSS-STEM Academic Excellence Workshops

MESA|SSS-STEM Academic Excellence Workshops (AEW) are designed to assist students in intermediate algebra, trigonometry, pre-calculus, calculus I & II, beginning and general chemistry I & II, and organic chemistry I & II. AEWs are supervised by a peer facilitator who develops worksheets and solutions that provide students with additional practice of the material covered in their math and science courses while also encouraging group study and networking among peers. As a complement to AEWs, MESA|SSS-STEM also provides facilitated group study sessions for target subjects, and tutoring services in chemistry and physics. As a special incentive for MESA students, MESA provides a stipend for MESA students that participate in at least forty percent of a given AEW, and for receiving a grade of “B” or better in their class.

Special thanks to all of the contributing facilitators and tutors for 2010-2011 that helped make the AEWs and other academic services a success. Students interested in becoming facilitators can request a facilitator application form in the MESA|SSS-STEM Office (MCS 100F).



Spring 2011 Workshop Team (left to right) Elizabeth Canales, Moises Gutierrez, Sahar Tashakor, Justin Seifert, Jose Gallegos, Keony Young, Mohammad Pezeshki, Mario Cabrera, Diego Bautista, and Elizabeth Bermudez.



Michael Parra receives stipend for participation in AEW and a grade of “B” or better in his final course grade.

Facilitator & Tutor Support Team

Fall 2010 - Spring 2011

Mario Cabrera, Dennise Lopez, Brett Lopez, Diego Bautista, Keony Young, Jose Gallegos, Vivian Meza, Mohammad Pezeshki, Jonathan Creencia, Justin Seifert, Elizabeth Canales, Sahar Tashakor and Joan Ngwuta



Kimberly Harry receives stipend for participation in AEW and receiving a “B” or better in her final course grade.

Math & Science Faculty Support

Math and science faculty provide an invaluable support for our academic resources by allowing us to promote our resources during brief class visits, and especially taking their time to help our facilitators and tutors be prepared to meet the needs of the material covered in their classes. To all of our math and science faculty, thank you for your collaboration and support and for helping promote student retention and success.

MATHEMATICAL SCIENCES FACULTY—V. Avakyan, E. Barajas, M. Bateman, B. Bayssa, L. Beckett-Lemus, S. Bickford, J. Boerger, J. Cohen, M. Cortez, J. Evensizer, F. Faridpak, G. Fry, M. Furuya, M. George, M. Georgevich, T. Gibson, A. Gizaw, H. Hamza, L. Ho, A. Hoang, R. Horvath, J. Hyman, R. Lewis, A. Martinez, J. Martinez, A. Minasian, T. Meyer, C. Nguyen, K. Numrich, A. O’Leary, M. Sandoval-Martinez, A. Sampson, A. Seyedin, E. Shamash, A. Sheynshteyn, J. Sims, S. Smith, R. Taylor, S. Taylor, L. Wapner, P. Wozniak, P. Yun.

NATURAL SCIENCES FACULTY— R. Altermatt, P. Arasasingham, C. Cowell, P. Doucette, C. Drew, E. Goldmann, A. Grant, P. Hacking, M. Jimenez, N. Kadomoto, M. Kantz, L. Leonardo, N. Lev, R. McLeod, T. Palos, S. Potter, S. Prieto, R. Shibao, T. Stewart, A. Tontcheva, and D. Vakil.

Specialized Counseling for STEM Students



(left to right) Counselor Kenneth Key and Freddy Cisneros during their counseling session.

We would like to welcome all of you to a very exciting journey this fall. You are part of a distinguished community of learners who share common interests and who will be taking similar courses. As counselors, we believe that the fall semester is very important to you. It sets the tone for your success as new or continuing students. You have already made a sound decision by opting to join the MESA and/or SSS-STEM Program, which continues to make history in supporting students whose majors require math and science courses. Our goal is to help you continue to make good decisions that will benefit you personally and professionally.

We look forward to meeting all of you in the MESA|SSS-STEM Center or in our offices in the Counseling Center. At that time, we will assist you in creating an educational plan to help you achieve your academic goals as quickly as possible. Remember to see us early so that you can complete your MESA, ASEM, or SSS-STEM application and verify that you are taking the right courses. If you already have an educational plan from another counselor, you still need to have it reviewed by a MESA|SSS-STEM counselor and placed in your file.

If you encounter any personal or academic challenges, please come to us as soon as possible so that we can make every attempt to help you. There are many academic support programs and resources available. We can aid in referring you to these services and letting you know where they are located. If you change your major or transfer university, you likewise need to see us so that we can review your educational plan and make any necessary changes.

If you are a continuing student, keep in mind that the fall semester is particularly important for those of you who are submitting transfer applications. Be sure to check the UC TAG (Transfer Admission Guarantee) Programs and see if any CSU's and private colleges/universities also have similar programs. Deadlines are critical, especially for your financial aid. **For fall admissions, the official period for CSU applications is October 1—November 30 and the filing period for UC applications is November 1-30.** Private Colleges/Universities application dates vary so check with a transfer counselor for the application dates. The ECC Transfer Center and MESA|SSS-STEM will offer UC Personal Statement Workshops beginning in October.

It is important to be aware that under the current economic climate in the state of California, the University of California system is continuing to limit opportunities for spring admissions. The California State Universities have recently allowed opportunities for spring admissions. Continuation of this will be dependent on the state of the economy. This requires students to maintain strong grade point averages (GPA) and complete most (if not all) of the preparation for the major. There are other opportunities to transfer both fall and spring semesters if you are considering out-of-state colleges or universities.

If you will be applying for financial aid for your four-year institution, remember to apply January 1 through March 2. You can always update the information on your FAFSA before the May 1 deadline if necessary. Financial aid deadlines vary among universities, so check for deadlines with the Financial Aid Office at the institution(s) you will be submitting applications.

We welcome all of you to El Camino College this fall, and we hope to get to know those of you who are new to the MESA or SSS-STEM Program. Just stop by and introduce yourselves to us and don't ever hesitate to contact us if you need any assistance at all. Our purpose is to help you achieve your goals and aspirations.

Please visit the MESA|SSS-STEM Center for counseling hours.

Kenneth Key & Daissa Lee



(left to right) Shamia Salih and Daissa Lee during their counseling session.

MESA|SSS-STEM Students on the Road

The MESA|SSS-STEM Programs help support student participation in activities and tours that can help the STEM community experience their future transfer campuses and also opportunities to work in industry. Through participation in MESA|SSS-STEM|ASEM Programs, students have toured local University and industry labs such as the UCLA Tokamak Laboratory, the Jet Propulsion Laboratory in Pasadena, California, and the Oxy Petroleum Corporation in Long Beach, CA.

Special thanks to Dr. Zoltan Lucky for hosting our trip to the UCLA Tokamak Laboratory and making the trip memorable for our students; Yomonte Cooper from the ECC Transfer Center for coordinating the JPL Tour, and Scott Hara, Sr. Reservoir Engineer, for coordinating the Oxy Petroleum Tour and taking the time to visit our campus and serve as a guest speaker to showcase his facility and resources in Spring 2011.



MESA|SSS-STEM students at the UCLA Tokamak Laboratory.

MESA|SSS-STEM Transfer Dinner



Spring 2011 Transfer Dinner

The Spring 2011 MESA|SSS-STEM Transfer Dinner on June 2, 2011 was a great opportunity to celebrate the success of our STEM transfer students as well as the success of our continuing students at ECC. The MESA|SSS-STEM Transfer Dinner highlighted the contribution of our facilitators and staff who have helped make the services provided to STEM students a success. We also congratulated students who have taken the initiative to apply for internship and scholarship opportunities that can enhance their field of study or financially support their goals at ECC. Among the guests who attended the event to show their

support for our MESA|SSS-STEM Programs were ECC President, Thomas Fallo, Vice President of Academic Affairs, Francisco Arce, and ECC Foundation Executive Director, Katie Gleason, among others. Both Fallo and Arce shared a few words of inspiration for our students and continued to encourage them to succeed in their studies. A special moment during the event was the presentation of the Northrop Grumman 2011 Excellence in Teaching award by Dean of Mathematical Sciences, Don Goldberg, to Arturo Hernandez, MESA|SSS-STEM Director, for his commitment and dedication to the success of the MESA Program and students.



(left to right) Don Goldberg and Arturo Hernandez.

Second Annual MCCP Math Challenge Competition

In the Second Annual MESA Math Competition, modeled after the American Mathematical Association of Two-Year Colleges Student Math League Test, seven El Camino College MESA students participated in this event. Among the topics covered in the exam were algebra, trigonometry, pre-calculus, analytical geometry, probability, and statistics. Out of the seven students taking the test, four El Camino College students tied for second and third place awards for the LA Metro Region. Huijing Gong, who tied with Jose Gallegos for second place, was the first place winner for the El Camino College Math Competition.



(left to right) Arturo Hernandez, Jose Gallegos, and Huijing Gong.

LA METRO Region 2nd Place

Huijing Gong
Jose Gallegos

LA METRO Region 3rd Place

Diego Bautista
Ernesto Sosa

MESA |SSS-STEM Academic Services

Available schedules, times and services may vary per semester. Special consideration is given to the ECC Transfer Center for the availability of their resources and activities each year in addition to MESA|SSS-STEM-sponsored activities and events. Please visit the MESA|SSS-STEM Center for more specific details and dates for these and other resources offered throughout the 2011-2012 academic year.

Membership - Our multiple programs including MESA, SSS-STEM, and ASEM have a specialized focus to help support students pursuing a math, engineering, or science major that is calculus-based. Interested students must be enrolled in a math or science class every semester, show progress toward transferring, and remain active in their respective program(s).

MESA|SSS-STEM Study Center - Located in MCS 100E/F, this space is equipped with the necessary resources to help MESA|ASEM|SSS-STEM members meet the demands of their classes. Students also gain the opportunity to network with other students taking similar courses and pursuing similar goals.

Academic Counseling - Every MESA|SSS-STEM|ASEM student is required to have a current educational plan on file. To meet this demand, academic counselors Ken Key (MESA|ASEM) and Daissa Lee (SSS-STEM) are available weekly in the MESA|SSS-STEM Center to meet with students.

Academic Excellence Workshops (AEW) - Led by an experienced peer facilitator, AEWs provide students with additional practice of current core math and science courses. See schedule for details about specific AEW subjects offered each semester.

Tutoring Services - Free tutoring is available in core chemistry and physics courses. Check schedule for details.

Internships & Scholarships - Get updated information throughout the year of new and continuing internship and scholarship opportunities. Check the MESA|SSS-STEM Center for posted opportunities or handbooks available.

Personal & Professional Development Workshops

Time Management - Learn effective ways for time management and productivity.

Personal Statement - Get tips on how to provide structure suited for multiple personal statements.

Resume Development - Start developing a plan on how to organize academic and work experience.

Financial Literacy - Learn how to make informed and effective decisions about money management.

Guest Speakers - Local industry, university, and other support service program representatives from various sources help promote networking and knowledge of desired fields of study in STEM.

Transfer Readiness - University representatives and ECC Transfer Center staff are invited to showcase the services offered from their campus for STEM majors.

Tours - Students are able to tour universities and local industries to visualize their future transfer or work prospects in STEM fields. Check out tentative tours for STEM majors each Fall and Spring semesters.

Student Professional Organizations - Gain first-hand knowledge of professional development in your field.

The El Camino Community College District is committed to providing equal opportunity in which no person is subjected to discrimination on the basis of ethnic group identification, national origin, religion, age, sex, race, color, ancestry, sexual orientation, physical or mental disability or retaliation.

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