

## About MESA

MESA (Mathematics, Engineering, Science Achievement) is a statewide program for students historically underrepresented in STEM (science, technology, engineering, and mathematics) industries to successfully earn degrees and pursue STEM careers. The SCC MESA program serves about 140 students each semester, providing services that include a study center, tutoring, academic excellence workshops, counseling, transfer preparation, and connection to industry and STEM careers. MESA was born out of the civil rights movement in 1970 through a partnership between UC Berkeley and Oakland Technical High School to address racial disparities in STEM. Since then, MESA has expanded across California in K-12 education, community colleges, and universities. Los Rios piloted the first community college program in 1989, and we still offer MESA at American River College, Cosumnes River College, and Sacramento City College, providing STEM students with tools and guidance to successfully transfer to a university and earn a bachelor's degree.



Lorena Jauregui



Maristella Bacod



Elyon Bailey



Lesley Barnett



José Barrera



Juan Pablo Becerra



Christina Cortez



Lauren Cortez



Jesse Flores Gomez



Jose Hernandez



Breanna James



Tanisha Jenkins



Renelle Johnson



Brittani Kelly



Kim Liaz



Benjamin Morales



Martin Te



Rebeca Vallejo



Eric Wyles

## Meet the staff!

Lorena Jauregui - Faculty Coordinator

Maristella Bacod - MESA counselor

Elyon Bailey - Instructional Assistant

Lesly Barnett - Counseling Intern

José Barrera - Instructional Assistant

Juan Pablo (JP) Becerra - Counseling Intern

Christina Cortez - Counseling Intern

Lauren Cortez - Instructional Assistant

Jesse Flores Gomez - Counseling Intern

Jose Hernandez - Instructional Assistant

Breanna James - student personnel assistant

Tanisha Jenkins - Counseling Intern

Renelle Johnson - Counseling Intern

Brittani Kelly - Student Personnel Assistant and Counseling Intern

Kim Liaz - counseling intern

Benjamin Morales - Instructional Assistant

Martin Te - Instructional Assistant

Rebeca Vallejo - Career Counseling

Professor Eric Wyles - Faculty Sponsor

## Transfer Spotlight

### Tiffany Sparks

**Sacramento State University**

**Biology emphasis in Clinical Laboratory Science**

**Recipient of the MESA Scholar of the Year award and \$500 Dr. Kevin Ramirez Memorial Scholarship**



From her speech:

This is a very uplifting moment for me as we all have gathered to celebrate the success of all of my MESA peers, and the amazing people that support us, and help us to achieve our dreams. I want to thank MESA for honoring me with the award of MESA Scholar of the Year. Thank you for this beautiful plaque, and much needed scholarship. Mesa has been there for me throughout my entire community college journey, and for that I am eternally grateful. You gals and guys seen something in me, even when I didn't. On that note I hope this speech reaches other like me who have been through the worse, are still trying to thrive and succeed in the world and need some hope that it is actually doable.

To say that this road has not been easy would be a huge understatement. Early on I was a victim of child abuse and neglect. My mother had a substance abuse problem and was unable to care for us at times. As I grew older, I fell prey to domestic violence and drank a lot. I had one child at 14 and another at 18. I was placed in group homes (foster care) for my teenage years and didn't receive a traditional high school education. Let's just say my prospects at achieving anything in life were bleak.

Through all of the hardships my Grandfather, school, and the people who worked at the school are some of the things that kept be going and put in me hope that I can excel and overcome any obstacle put in front of me. I first joined MESA in the early 2000s when Mai-Gemu Johnson was director. They welcomed me with open arms. I finally had a place on campus that made me feel like I actually belonged there. I was gone from school for a while, a long while. When I came back, I met Toni Newman, she suggested I rejoin Mesa. I thought I'd been gone too long, that I was too old, and that I just wouldn't fit in. I couldn't have been more wrong. I signed up again and had the pleasure of meeting Lorena Jauregui the current MESA director, along with the rest of the MESA staff and once again I was welcomed with open arms and had a place where I belonged and could grow and reach my goals. Coming back to MESA was one of the best decisions I made and played a huge role in me surviving taking 26 units (I attend college in Oakland too) and getting all As.

As far as the goals I'm going to reach, I now say "going to" in stead of "want to", they include transferring to Sacramento State University. My major is Biology with an emphasis in clinical laboratory science, and after that transferring to either UC Davis or San Francisco state and completing postgrad training to become a licensed clinical laboratory scientist. I've recently graduated from Sac City, been accepted into Sac State, and I'm taking classes in Oakland at Merritt College in histology. I went from bleak prospects to the sky's the limit and it feels unreal and exhilarating! I hope my words have brought comfort and strength to any of you who feel like getting an education and moving forward in life is too hard or even unattainable. I'm walking proof that with the right support group and mindset all of your dreams are obtainable and within reach. Thank you for listening.

## A Year In Review

8/17 - Math Jam: MESA social event centered around math for students to get help from IAs and a Professor, see where their math placement is, and where they may need improvement

10/7 - MESA social LinkedIn picture event: Juan Pablo (JP) Becerra + Elizabeth Hammer hosted a social event where students could get headshots taken for free

10/15 - UCD Pre-Health Conference

10/26 - Virtual Spooktacular event

10/28 - Scholarship workshop

10/28 - AMSA DIM guest speaker: Medical doctor came and spoke to students

11/02 - Social and study session + swag giveaway



## Student Spotlights

**Jessica de Laguna**

**Chemical Technology/Biology Major**

**Transferring to UC Davis to Major in Cognitive Science**



As a student enrolled in CHEM 484, I was able to be a member of the SCC Undergraduate Solid-Phase Peptide Synthesis Research Team. Our team, pictured above from left to right, consists of Dr. Dao, SCC Chemistry Department Chair, Jessica de Laguna (that's me), William Naab, Haily Holston, Sureena Deol, Imaan Shahzad, and Cain Buckler. Together, we are synthesizing solid-phase peptides in order to test their antibacterial properties and effects on reversing and preventing the process of Alzheimer's disease. Our latest peptide is 10 amino acids long that alternate between Leucine and Arginine. We are currently running several HPLC tests on our newly created peptide to purify the sample for further testing. Our future goals include creating peptides with different arrangements of amino acids in order to observe their interactions with the hydrophobic interactions between Beta-Amyloid, creating peptides with different arrangements of amino acids in order to observe their interactions with the hydrogen bonds between Beta-Amyloid, and testing created peptides on bacterial cultures to further observe antibacterial properties. My contributions include helping to create the actual peptides and rotating as the Lead Researcher, which encompasses tasks such as updating the research log and sending out announcements, assisting with mathematical calculations, and calibrating the HPLC. I also attend bi-monthly research meetings at the UC Davis Alzheimer's Disease Research Center and look forward to taking the skills and experience gained as part of Dr. Dao's undergraduate research team, into the field of cognitive science at UC Davis and eventually into the field of medicine. My mentorship experience with Dr. Dao has been invaluable. This experience is preparing me to apply to the UC Davis School of Medicine and continue my career goals of becoming a physician-scientist who specializes in cognitive science in addition to mental and behavioral health.

## A Year In Review

11/18 - MEC engineering club career day: MEC ran virtual event including a guest speaker, lots of students, and mesa alumni

11/18 - AMSA Diversity In Medicine club mentorship: Current medical students met with community college students to answer questions and provide mentoring (virtual)

11/18 - Career Day: Zoom + in person hosted by MEC, students got help building a resume, tying a tie, and were able to peer review each others resume

12/2 - AMSA DIM Prep-medico info + holiday party

12/7 - MESA holiday party + study session

1/9-1/12 - MESA flex week: Week where MESA staff trains for a week before the spring semester starts





## Student Spotlights

**Allison Schiffmaier**  
**Physics and Mechanical Engineering**  
**Transferring in 2025**  
**NASA Lucy Ambassador and AIAA Diversity Scholar**



Ever since I was young, I was amazed and inspired by science. There is so much potential in the natural world, so what if I could invent new possibilities? What if I could explore new caverns of knowledge, save humanity, and expand the known reality for new horizons? Could this be done? And, indeed, I began studying animal and veterinary science since I was five years of age, as the wonder and fascination fed my desire to learn more about science. Later, in high school and early college, I learned the term coined as "STEM." This caused me to look into new topics of medicine, biotechnology, nanotechnology, and eventually, space science. During the on-set of covid-19, I discovered NASA's L'SPACE programs NPWEE and MCA. I was able to learn how to network, research, build formal proposals (PDRs), and present this research for funding. My research and experience in research (on regolith, space medicine, and exploration) led me to apply and be accepted into the NASA NCAS program and landed me a position as a Lucy Mission Ambassador. As an ambassador, I've been able to present and advocate for the research done on the Trojan Astroids found in the orbit of the main Astroid Belt and the planet Jupiter. Finally, this led my journey to become in contact with many top-ranked Aerospace Professionals within the AIAA, Boeing, Blue Origin, and the Military Space Force as a Diversity Scholar in ASCEND 2022. My goals for this next year includes finishing the majority of my major prep for transfer to UC Davis in Aerospace Engineering, and to publish my paper on AI Sentience.

## A Year In Review

1/20 - REU

presentation by Aliyah Penn: Virtual event hosted by MESA, open invite to students had a good turnout and was held during the first week of classes

1/26 - Flex workshop:

MESA student and alumni panel

2/1 - Center reopening event:

Incredible turnout, brought lots of foot traffic to the center, staff from other offices came by, plus new sign ups, and now people regularly study inside the center. After being closed for over two years during the pandemic and some center renovations, the SCC MESA Center is now open! Our Grand Re-Opening event was open to all Los Rios students, staff, faculty, and administrators!



## Student Spotlights

**Shelby Madruga**

**Engineering - Aeronautical/Mechanical  
Transferring Fall 2023**

Over the summer, as an Aerospace Engineering intern at the California Institute of Technology, I worked under the advisement of Dr. John O. Dabiri on the diel vertical migrations of zooplankton. I learned how these migrations might be related to marine carbon sequestration and nutrient mixing in the ocean. Some notable takeaways from the internship experience would be to connect with everyone, take initiative to find opportunities, and learn what you do and do not like within the boundaries of your career/major. This experience gained me valuable connections with excellent professors, Ph.D. candidates, and professionals in their fields. After taking the initiative to reach out to some, I received replies that offered more invitations for opportunities. Despite the great experience, I learned some positive and negative things about my interests in academia and industry. On the brighter side, having this experience as an intern will most definitely help me prepare for the job search process after college and know what is expected in the real world. Girls Love to Fly, a non-profit that supports women in aviation, is a fantastic flight school that I became involved with at the beginning of 2022. As a student pilot, I learned basic aerodynamics, flight maneuvers, the national airspace system, weather principles, and of course, how to fly an airplane. Also, as a recruiter, I speak publicly to those interested in beginning their future in aviation, encouraging them to gain a deeper understanding of the magnificence of flight and the meaningfulness of connecting people, places, and hearts. Notably, I learned that in aviation, the sky is not the limit and that aviation allows us to find diversity professionally, culturally, and personally. Aviation is a great career choice and can be highly rewarding. Anyone can pursue this career and despite the cost, there are many scholarships available to you! In the future, obtaining a private pilot's license can lead to fantastic opportunities. My goal in pursuing this license is to eventually apply for the astronaut selection program as a promising candidate.



## A Year In Review

2/4 - Stockton health and power conference (virtual)

**DISCOVER  
UC DAVIS**  
Friday, February 10, 2023



**UC DAVIS**  
Transfer Opportunity Program  
Undergraduate Activities

2/10 - Discover UCD event: At

least 7 MESA students, some scc students, and MESA team attended a conference like event at UCD where they listened to speakers and heard from panels of current students

2/25 - UCD Black pre-med conference: Held at the UC Davis Medical center

2/27 - AMSA DIM guest speaker ~ Jose Barrera (MESA's own)

3/18 - San Jose Silicon Valley Women in Engineering event

3/19-20 - Sac FACCC leadership conference: MESA students went learned about advocating, how laws are made, and met with the office of Senator Ashby (for our community college district)

## Congratulations MESA 2023 Transfers!

**Elyon Bailey** - UC Davis - Neurobiology, Physiology, and Behavior

**Carla Isabella Campos** - UC Davis - Wildlife, Fish, & Conservation Biology

**Qian (Cynthia) He** - UC Davis - Global Disease Biology

**Haily Holston** - UC Irvine - Biomedical Engineering

**Jian (Jason) Li** - UC Davis - Statistics

**Jacob Petros** - UC Davis - Computer Engineering

**Emalyn Saechao** - UC Santa Cruz - Astrophysics

**Muctar Sanneh** - UC Davis - Statistics

**Eric (Jaeun) Sim** - UC San Diego - Computer Engineering

**Erica Sosa** - UC Davis - Chemistry

**Tiffany Sparks** - CSU Sacramento - Biology

**Samy Kuang Ye** - Cal Poly - Aerospace Engineering

**2023 Top 10 MESA Scholars of the Year** - these students completed their MESA tasks completely, on time, and before anyone else!

1. Joyce Bartholomew
2. Tran Hoang
3. Araceli Robles
4. Haspreet Singh
5. Sohail
6. Ashley Wilburn
7. Emalyn Saechao
8. Janet Saechao
9. Aeruy Jiang
10. Allison Schiffmaier

**2023 MESA Team Member of the Year: Administrator**

Angelena Lambert, Dean of Mathematics, Statistics, Engineering

**2023 MESA Team Member of the Year: Faculty**

Maristella Bacod, MESA Counselor

**2023 MESA Team Member of the Year: Classified**

Breanna James, MESA Student Personnel Assistant

### About Career Day!

MESA wanted to host a Career Spotlight Day for students to introduce them to different STEM fields. We had a Student Outreach Ambassador from UC Davis TOP (Transfer Opportunity Program) come in and talk to students about their experience, representatives from UC Davis AvenueM, and a representative from Cyber Proud company (who talked about what they do and their internship program).

We also had some MESA presentations in between for recruitment and to tell students about MESA and its eligibility requirements since this was open to all SCC Students.

Towards the end we had more than ten students come to our sessions. And overall, the event was a success, we had students who were interested in joining MESA and were excited to hear our guest speakers!

## A Year In Review

3/31-4/02 - MESA student leadership retreat ~ statewide to Santa Cruz: Students who attended were able to participate in various events full of learning including a field study project as well called a "STEM-athalon"

4/3 - MESA + AMSA DIM- Dr. Charlene Green UCD school of medicine assistant dean of admissions (in person)

4/7 - Integration Bee math competition: 17 students competing 11 moved on, MESA big part

4/21 - Career day via SCC student conference

4/28 - SCC student alumni panel through MEC

5/4 - End of year celebration/ceremony: Event held by MESA to celebrate and honor our continuing and transferring students



## MESA Student Clubs



### Multicultural Engineering Coalition (MEC)

**Co-Advisors:** Eric Wyles & Lorena Jauregui

**Club President:** Abram Fontanilla

**Contact:** <https://sites.google.com/view/multicultural-engineers/mec-home>

This club serves students interested in engineering and computer science careers, and was founded in Fall of 2019 as a collaboration between the professional chapters of SHPE (Society of Hispanic Professional Engineers), NSBE (National Society of Black Engineers), and SWE (Society of Women Engineers). To build a sense of community among Sacramento City College science and engineering students and increase the number of culturally responsible scientists and engineers who excel academically, succeed professionally, and positively impact the community through outreach and community engagement activities, project-based team collaboration, and professional development support.

### AMSA Diversity In Medicine

**Advisor:** Lorena Jauregui

**Club President:** Elyon Bailey

**Contact:** [saccitymesa@gmail.com](mailto:saccitymesa@gmail.com)



**AMSA – Diversity in Medicine**

American Medical Student Association

This club serves students interested in pre-medical and pre-health careers, and was founded in Fall of 2019 to connect students with peer mentors, with professionals in the healthcare industry, and with opportunities and activities that enhance their career preparation. This also serves as the AMSA (American Medical Student Association) Pre-Med Club chapter, AMSA fosters a community of future physicians through education and advocacy.