MESA® College of Marin

SUMMER 2026 NEWSLETTER

2025-26 BY THE NUMBERS

110 Active members

22 Transferring students

49 Events

Tutoring offered for **14** STEM classes

Weekly facilitated study groups for **6** STEM classes

20 Students doing MESA-directed projects

8 Paid MESA interns at the Buck Institute

As MESA at College of Marin approaches its third birthday, this year has been one of growth and firsts.

We launched four new programs: the Ramp Up to Research Summer Research Program, Calculus On-Ramp, Transfer Prep, and hands-on STEM projects. Together, these opportunities support and incentivize students as they prepare for major coursework, engage in research, explore their fields, and get a head start on transfer applications. MESA students also attended the Out in STEM Conference and MESA Transfer Conference for the first time, expanding their networks and exposure to STEM pathways.

As our cohort continues to exceed 100 actively engaged students, we have deepened our partnership with the Buck Institute for Research on Aging. This year, eight first-generation college students are participating in paid STEM internships. We also increased the number of students able to attend the SACNAS National Diversity in STEM Conference. Finally, Faculty Sponsors took on an expanded role this year, with differentiated responsibilities focused on (1) research and STEM projects or (2) academic development and study groups. This has been incredibly meaningful for our students.

Thank you to all our campus, community, and student partners for your support!

Learn more: www1.marin.edu/mesa
Follow us on Instagram: @mesa_at_COM

TRANSFER STUDENT SPOTLIGHT

We are so very proud of the **22** MESA students who are graduating and pursuing STEM degrees at four-year universities:

- Aadesh Bamane, Mechanical Engineering at San Diego State University
- Alexandra Loucks, Ecosystem Management & Forestry at UC Berkeley
- Allie Bertolina, Nursing at the University of San Francisco
- Andrea Iojica, Environmental Earth & Soil Sciences at Cal Poly San Luis Obispo
- Ben Madrigali, Chemistry at San Francisco State University
- Donald Ahn, Data Science at UC San Diego
- Dovas Marshall, Mechanical Engineering at UC Irvine
- Emily Cardwell, Global Disease Biology at UC Davis
- Farhan Khaliq-Baporia, Applied Math at UC Berkeley
- Hassiel Amador Mendieta, Materials Engineering at Cal Poly Pomona
- Jake Nuernberger, Computer Science at San Jose State University
- Jane Mcnevin, Chemistry at UC San Diego
- Jason Frank, Chemical Engineering at UC Berkeley
- Kevin Rocha, Business at San Francisco State University
- Margo Marsh, Chemistry at UC Davis
- Mateus Xavier Veneroso, Computer Engineering at [Still Deciding]
- Moss Fallat, Neuroscience at UC Berkeley
- Nelson Mazariegos, Data Science at UC Davis
- Odalis Rodas, Biochemistry at San Francisco State University
- Omi Bangdel, Engineering at San Francisco State University
- Renz Llevan Garado, Medicinal Chemistry & Drug Design at UC Davis
- Victor Almaraz Rosales, Electrical Engineering at UC Santa Cruz

COUNSELOR CORNER

Year three is complete—and truly one for the books. The MESA community has continued to grow not only in numbers but in accomplishments, confidence, and knowledge. Our scholars have been thoughtfully reflecting on the skills they've developed and using their experiences to strengthen them even further.

The fall semester was especially busy as we supported applications to CSU, UC, and private universities. With 21 MESA scholars applying for transfer, there was an incredible sense of energy and anticipation. It has been an honor to witness their resilience and growth from their first days at COM to this major milestone—we couldn't be prouder.

That excitement carried into the spring semester as acceptance letters began to arrive, opening doors to new opportunities and possibilities. At the same time, we look forward to hearing about the enriching summer experiences of our continuing students as they take part in research internships and summer coursework.

The growth of our MESA community never stops. While many of our scholars head into new adventures this summer, the MESA team will continue working to strengthen and expand our transfer support program—making it more seamless, engaging, and celebratory at every step. We are also developing structured opportunities for incoming scholars to build strong study and learning skills to support their success in STEM.

We can't wait to share what's ahead!
Guadalupe Jimenez Martinez

MESA IN THE COMMUNITY

MESA's mission includes increasing access to STEM and encouraging more students to pursue a major in science, mathematics, or engineering. Each year, we engage in outreach activities in the community, K-12 schools, ESL classes, and on campus.

Sample activities include:

- Facilitating hands-on chemistry experiments for 516 three to ten-year-olds at the North Bay Science Discovery Day
- Presenting to all Marin County high school counselors
- Teaching a summer STEM Career Academy for local high school students
- Collaborating with ACS to lead a lab for AP Chemistry students from Archie Williams High School
- Welcoming members of AAUW Marin to campus for a STEM-focused tour and student panel
- Participation on a Spanish-language student panel for English Language Learners at San Rafael High School
- Meeting with all Novato Unified 8th graders and quizzing them on fun science trivia at the "Empower Tomorrow" career exploration event

MESA STUDENTS INTERN AT THE BUCK INSTITUTE!

Lisette Gutierrez, Environmental Health & Safety Intern

I am interning with the Environmental Health and Safety department with Dr. Chris Endicott. I am in charge of completing monthly safety checks on first aid kits, Automated External Defibrillator, spill kits, creating safety labels and signage, and occasionally helping facilities check the eye wash stations and fire extinguishers. Dr. Endicott and I also work as a team to facilitate the disposal and waste management of lab chemicals, as well as look up SDS sheets and combine similar chemicals in waste bottles.

A takeaway from this experience is not to be afraid to ask questions, and it is a good first experience in the lab workplace. This experience has helped me to become a better scientist by paying close attention to details, safety lab measures, and understanding what to do in case of a chemical emergency.

Aadesh Bamane, Facilities Engineering Intern

This academic year, I have been interning at the Buck Institute as a Facilities Engineering intern. This is my first internship role directly related to my mechanical engineering major. During this time, I have worked on a project to reduce energy costs, and I developed an operational report of the institute's HVAC system by analyzing building drawings and the BMS to help orient new employees and management. Beyond that, I shadowed engineers to troubleshoot fume hood airflow issues and perform hands-on maintenance on exhaust fans. This experience has solidified my interest in pursuing a career involving hands-on projects, and I feel much more confident about diving into complex mechanical systems to learn more about them.

Nury Calderon Reyes, Newman Lab & Clinical Studies Intern

In the fall semester, I presented a journal club paper which pushed me to deeply engage with primary scientific literature and communicate research findings to an audience. In the spring, I have been working with the Clinical Research Unit, assisting with the transition to a new Laboratory Information Management System and supporting Clinical Research Associates with visit preparation. One of my biggest takeaways has been learning how much coordination and precision go into clinical research before any data is ever collected.

This experience has grown my confidence tremendously, because I now see myself as someone who can contribute meaningfully in a real research environment, and it has strengthened my commitment to pursuing a career in science and medicine.

> **The collaboration between the Buck Institute and MESA has been impactful in multiple ways. Not only have the MESA students gained real-world experience, but they have also made significant contributions to their host departments/labs and brought energy and enthusiasm to their teams.**
>
> **-Gregory Chin, PhD**
> **Snr. Education Program Manager, Buck Institute**

MESA STUDENTS INTERN AT THE BUCK INSTITUTE!

Mateus Veneroso, IT Intern

During my internship at the Buck Institute, I worked as a Help Desk intern, supporting staff with technical issues and maintaining IT systems at the labs. I assisted with troubleshooting hardware and software problems, setting up devices, and ensuring users could continue their work without interruptions. One of my biggest takeaways was learning how to adapt to a different ticketing system, a new work environment, and different support needs than I was used to. The experience helped me build professional relationships, and it also reinforced my interest in technology.

My experience was valuable, I had the chance to work in another professional environment which helped me see other IT related work process and apply my technical skills that I learned at COM. This helped me build confidence and improve my communication skills a bit. I'm very grateful for the experience.

NEW SPRING & SUMMER INTERNS

Nelson Mazariegos, Facilities Engineering Intern

I was honored to be accepted into the Facilities Engineering Internship at the Buck Institute. Going into the role, I didn't know exactly what to expect, but I was excited to gain experience and build my engineering intuition. So far, I've been working on disassembling decommissioned boilers, and getting to see how everything connects while working hands-on has been a really fun and valuable experience.

Nick Nguyen, Clinical Studies Intern

Hello readers, my name is Nick Nguyen. My position at Buck is with the Newman Lab Clinical Research Team. I am responsible for generating data in spreadsheets and writing scripts to help automate them, quality assurance, designing posters, and weekly logistics. I am excited to apply the skills I've learned throughout my studies in a real-world place of work. By the end of my internship, I hope to gain enough transferable professional experience and skills for my next position in my career.

Ebrahim Ashraf, Facilties Engineering Intern

I'm Ebrahim, and I am interning at the Buck Institute for Research on Aging through the facilities engineering internship position. At the Buck I will be helping maintain and operate many of the large-scale facilities needed to run a research institute as big as the Buck. These include electricity, water, and HVAC. So far, I have met lots of new people, gotten lost in the hallways multiple times, and learned a lot about how these systems work. I've enjoyed it so far and I look forward to the rest of my time there!

RESEARCH & HANDS-ON STEM PROJECTS

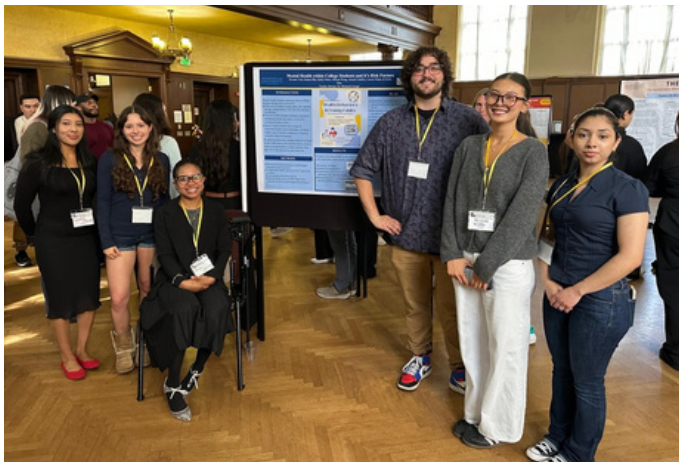
This year, the MESA program has connected students with hands-on STEM projects to gain experience in their major and build their resume. When eligible, students are paid for their time. We asked students to share a little about their projects and what they have learned.

Collaborative Public Health Research at Dominican University
Filly Brott, Nury Calderon Reyes, Emily Cardwell, Moss Fallat, & Nina Majdoubi

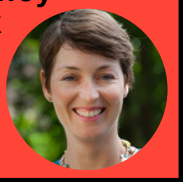
This semester, we have been working with Dr. George and her students at Dominican University on an epidemiology research project that examines patterns of substance use among college students in Marin County. We've been heavily involved in the research process every step of the way: from creating a body of literature, to working on and submitting for Internal Review Board (IRB) approval, to writing the survey and recruiting subjects.

Being so entrenched in this project from start to finish has affirmed my passion for research and given me so many more skills to take with me onto my next research project. I have really enjoyed the opportunity to do research and to work with a dedicated lab team where everyone has great ideas and contributes to the work. I hope Dominican and MESA have more opportunities to collaborate in the future!

-Moss Fallat



> **The students are amazing!! They are engaged, they are helpful, and they are really adding to my lab work in a meaningful way.**
>
> **-Dr. Michaela F. George**
> **Dominican University**



Biodiversity Coding & Data Analysis
Nick Nguyen, First-year Mechanical Engineering Major

This project involved developing Python scripts to organize and process monarch butterfly data collected by students. With help from Graham, I built tools to clean and structure raw data and generate visualizations for use in Dr. Agudelo-Silva's presentations. The primary goal was to create a reusable script to organize and graph an ever-changing dataset.

A key takeaway from this experience was learning to communicate technical requirements effectively and adapt to evolving project needs. My confidence as an engineer has grown significantly since my first day at COM. While I still experience imposter syndrome, I am no longer hesitant to deliver reports and now anticipate and navigate unexpected challenges with greater confidence.

This project strengthened my confidence as an engineering student. By applying the skills I've learned over time, I recognized my ability to contribute meaningfully to real-world projects. I also became more comfortable treating mistakes as part of learning and inevitable in a professional environment.

Victor Almaraz Rosales
Embedded Weather Station

This project is an embedded weather station using an ESP32 that collects environmental data such as temperature, humidity, pressure, and GPS location. This project gave me hands-on experience with embedded software, specifically in binary data serialization and long-term logging. I also learned how to integrate solar power to make the station fully autonomous.

I strongly recommend this type of project to anyone interested in embedded programming, renewable energy, and teamwork!

Comwe (College of Marin Weather) Network
Graham Auger

The goal of our project is to create an autonomous system that records environmental data and aggregates it into a central database so that it can be used to find correlations with the local butterfly population. This project has involved using and building on both Victor's and my own pre-existing knowledge of hardware, low-level programming, and configuring and programming the server backend for the hardware to communicate with. This has required both focusing on and getting each individual part to function correctly as its own self-contained unit, while also having a high-level holistic view of how all the parts communicate and work together to make a system that achieves the goal of this project. In addition to all the hard skills needed by this project that were previously mentioned, soft skills such as a high level of collaboration and communication are also key to the project's success as well. It has been an awesome and great learning experience that has been fun to work on, and we hope it will benefit College of Marin and the STEM community by making such data available, as well as a system that can be continuously expanded on and maintained, providing academic opportunities for students.

> **The Engineering, Computer, & Data Science group has made significant advances in hardware and software for the systems and software to manage butterfly populations on campus. I have noticed that working with students in real, hands-on projects builds their confidence and promotes creativity.**
>
> **It has been a privilege for me as a Professor at College of Marin to work with students who like science, are creative, and want to explore. Working with the MESA students has been an outlet to combine their creativity with my experience and scientific curiosity. My teaching job has been enhanced by working with the MESA students, because I can do hands-on projects, not just teach theory.**
>
> **-Dr. Fernando Agudelo-Silva**

MESA STUDENTS ATTEND NATIONAL CONFERENCES

Over the course of the 2025-26 academic year, MESA students traveled to STEM conferences across the state and the country. These conferences allowed students the opportunity to deepen their technical knowledge, network with STEM professionals, and enhance their confidence as scientists and engineers.

- Conference for Engineering Diversity - San Jose, CA
- Out in STEM Conference - Baltimore, MD
- Society for the Advancement of Chicanos & Native Americans In Science (SACNAS) National Diversity In STEM Conference - Columbus, OH
- Stanford University Minority Medical Alliance (SUMMA) Pre-Health Conference - Palo Alto, CA
- MESA Student Leadership Retreat - Santa Cruz, CA
- MESA Transfer Conference - Santa Rosa, CA

In total, 47 MESA students were able to attend these conferences completely free of charge.

Attending the oSTEM Conference was incredibly life-changing & affirming to be surrounded by people who shared my queer identity and were also scientists.
-Moss Fallat

My favorite part of the conference was the incredibly diverse and talented research proposal student presentations. It was incredibly fascinating & a treat to see such brilliant young minds talk about their research passions.
-Hailey McCaffrie

To say that the SACNAS experience was transformative would be an understatement. As a scientist, a woman, & a Latina first-generation student, there have been very few spaces where I have felt belonging or not in competition. SACNAS has made me more confident in believing that yes, I do belong!
-Nury Reyes Calderon

SUPPORT FOR ALL STEM STUDENTS: MESA'S STUDY GROUPS

Since Spring 2024, MESA has offered weekly study groups for students in STEM classes. These small groups are facilitated by faculty members, instructional specialists, and peer tutors and synced with current course material.

Since their inception, these study groups have been open to all students, regardless of MESA membership.

Students who participate in facilitated study groups:

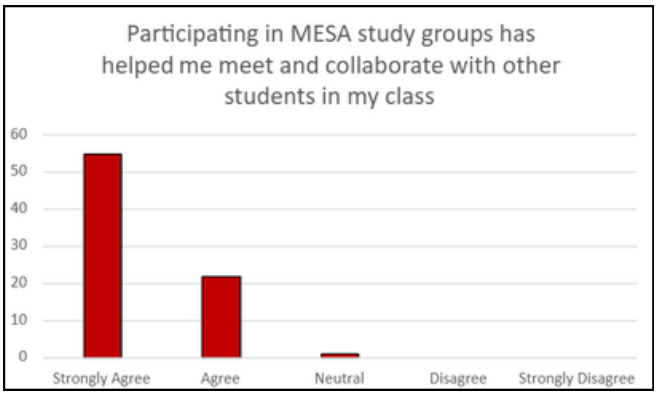
- Build a learning community and cohort of peers who problem-solve together
- Increase confidence with challenging course concepts
- Commit to dedicated, structured time on task
- Strengthen study strategies and academic habits
- Gain direct access to expert support while building relationships with tutors, instructional specialists, and faculty

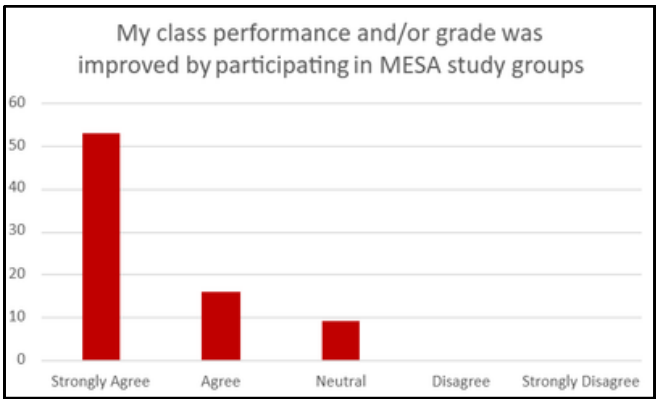
Aligned with College of Marin's commitment to educational excellence and preparation for transfer to four-year universities, facilitated study groups are a proven strategy for improving persistence and success in rigorous STEM coursework. They provide structured practice time, normalize help-seeking behavior, and connect students with mentors and classmates.

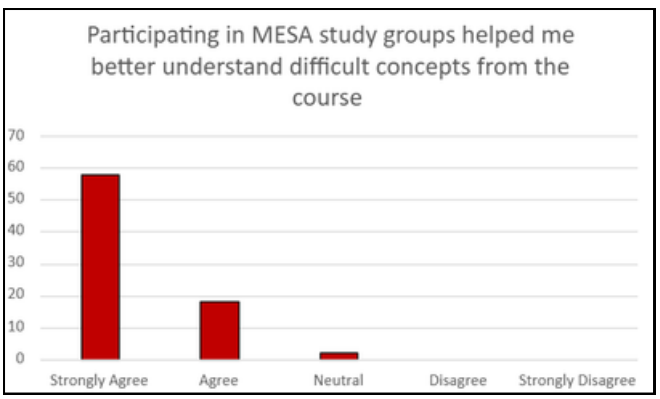
One of our most consistently popular study groups is Organic Chemistry (Chem 231/232). Class enrollment and student diversity have dramatically increased since MESA started supporting students in the class in Spring 2024. A large part of this success has been MESA tutor, Margo Mash, who has helped O-Chem students for the past three years. Thank you Margo!

"MARGO IS THE BEST O-CHEM TUTOR!!! SHE REALLY CARES ABOUT HELPING PEOPLE UNDERSTAND OCHEM AND EVEN MAKES PRACTICE EXAMS TO HELP PREPARE STUDENTS. I DON'T THINK I WOULD HAVE DONE AS WELL AS I DID WITHOUT HER."

-COLLEGE OF MARIN ALUMN







"Invaluable. Since MESA introduced dedicated study hours for ochem, I've observed some of the highest exam/quiz class averages (Fall 2025) in the decade I've taught the course at COM, reflecting the impact of structured, collaborative learning.

- Dr. Scott Serafin

"I have been teaching chemistry for 21 years at CoM. Since we began MESA tutoring I have had the highest success rates in Organic Chemistry in my career. Some students have a harder time approaching the instructor for extra help, but having a peer do tutoring and extra study sessions has been an absolute game changer, especially for those students who my feel more shy or maybe feel like they don't belong in such a high-level course. The MESA and MESA tutoring brings everyone in for a common focus of chemistry and community. It is absolutely essential going forward.

- Patrick Kelly

RAMP UP TO RESEARCH SUMMER PROGRAM

A paid part-time summer program to build your resume,
develop research skills, & receive mentorship

June 15 - July 23

- 100% of 2025 participants felt that the program was a worthwhile use of their time
- 100% of 2025 participants learned important skills related to the research process
- "I have gained knowledge on how to read & analyze scientific papers, understand the structure of research writing (including abstracts, methods, and data analysis), and look into real-world research topics. The meeting with panelists was awesome. It gave a clearer view of the academic & industry paths & inspired me to think more about my research interests." -M.V., 2025 Participant

NON-COMPETITIVE APPLICATION DUE ASAP
TINYURL.COM/RU2R26

GET A HEAD START ON CALC 1 THIS SUMMER!

MESA CALCULUS ON-RAMP

JOIN THIS SMALL GROUP OF MESA STUDENTS + A FRIENDLY NEW PROFESSOR TO PREPARE FOR MATH 123.

WE'LL HAVE LUNCH, GAMES, SNACKS, STUDY SKILLS, & ENGAGING HANDS-ON HELP.

ELIGIBLE STUDENT PARTICIPANTS MAY RECEIVE A $200 STIPEND.

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Thank you students, campus allies, and community partners for your support and participation this year!