



MESA MILESTONES

Featuring momentous affairs of the MESA program at Allan Hancock College

Fall 2024

Who Let the Deep-Sea Dogs Out!?

by Professor Justin Rucker, Electronics Technology & Robotics Team Advisor, AHC

Whether it's competing on the world stage in high-level robotic world competitions or serving local elementary students through robotic games and workshops - there are so many exciting things happening at the Allan Hancock Robotics Club. The team consists of several students who have a vision to empower young people, inspire creativity and innovation, and to have a positive impact on our community through technology. Oh yes... and they have a lot of fun as they do it.

The club is very diverse and consists of several students from many different backgrounds including electronics, computer science, chemistry, mechanical, manufacturing, marketing, and much more. If you lack any background or experience in these areas, no

problem! The club offers hands-on experience for beginners to get familiar with the basics that will get you comfortable with coding, electronics, manufacturing, marketing, or any other area you may be interested in relating to robotics.



For the 2024–25 season, the team's focus is designing an underwater robot to compete in June at the World Championship held in Michigan. The MATE ROV Competition is a global robotics competition focused on advancing technology through ocean research and ROVs (remotely operated vehicles). This will be the team's third year competing and representing AHC on the world platform. Over 70 schools from around the world will come together to compete.

This year's robot will be a brand new, one-of-a-kind, unique ROV completely designed and manufactured from the ground up by the AHC team. Everything from electronics, mechanical parts, and software will be designed, built, and tested by students. The robot will need to navigate through obstacle courses in the water, move objects, and accomplish specific underwater objectives within a determined time frame.

To learn more about the club or get involved, please check out our Instagram @AHC.robotics. Thank you for your support!

Don't delay! Now is the time to invest your time and energy into securing 2025/2026 scholarships and summer 2025 internships! See the links below and learn about securing scholarships and internships – two invaluable components of a STEM education.

<https://www.hancockcollege.edu/mesa/Scholarship.php>
<https://www.hancockcollege.edu/mesa/MESAinters.php>



The only thing standing between you and scholarships/internships is your effort to make it happen. If you need help, see your MESA/STEM Academic Success Center for assistance. Make it happen for yourself. You will never regret it!

Joy in the Hardship

by Emilio Benitez Aguinaga, MESA Student, Astrophysics

The struggle.

Of hard classes, work, athletics, time management, and every other aspect there is to life. It is the most daunting part of life but has resulted in the most fruitful of changes in my character over the years. Something which I only came to understand through those very trials, by accepting challenges instead of resisting them; it's allowed them not to break but shape my person. I found that this approach to life has made it significantly easier to move forward whenever I run into obstacles.

Down what paths has this attitude taken me? I do a bit of everything like music, athletics, astrophysics, and club leadership. I try to use any opportunity I get to improve myself in all aspects and I think as a result I've been able to achieve some of the things I'm most proud of, I somehow year after year manage to stay afloat amongst my super busy semesters (my counselors know all about that), I founded the Allan Hancock Astronomy club in the Fall of 2024, I had made an independent Jazz group for high school, and most of all I developed an unsurmountable perseverance.



Of course, it isn't all just me, a lot of this wouldn't have happened if it weren't for my incredible support group of friends and my wonderful other half. So far, my journey has been full of wild experiences and I'm ready to meet the next set of challenges as I transfer out in spring 2025.

I genuinely believe that life generally gets better regardless of how difficult something may be in the present, it's a matter of perspective. Lock in but don't forget to make jokes every once in a while!

Reach Out - Use Your Resources!

by Professor Dom Dal Bello, Engineering

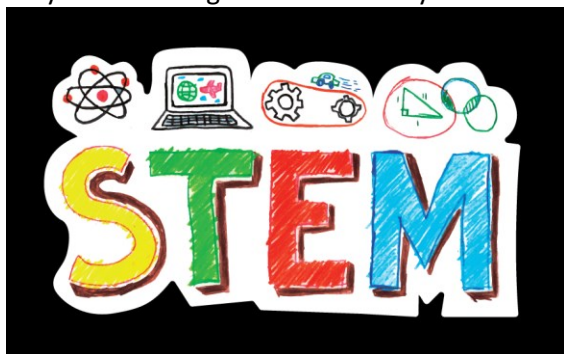
STEM students, please **use your resources**. There are quite a few for STEM students at AHC. Why would you not do all in your power to learn class material?

- **Faculty Office Hours.** Full-time faculty have five office hours per week, and most of your STEM courses are taught by full-time faculty. Get help early so you understand the material that is foundational.
- **Weekly MESA/STEM Review Sessions and Organized Study Groups** – or organize your own group. Meet with other students consistently (not just right before an exam). Among other benefits, working with other students: (1) keeps you accountable; (2) allows you to learn from one another; (3) solidifies your knowledge when you explain things to one someone else.
- **MESA/STEM Tutors.** You have a lot more help than any previous set of classes with your instructors and our Embedded Tutors.
MESA/STEM Tutor
Schedule: <https://www.hancockcollege.edu/mesa/aew-tutoring-schedules.php>
- **Math Center Tutors.** Get drop-in help with math. Open 9-8 Monday-Thursdays, 9-2 Friday, and 11-4 Saturday. Zoom tutoring is also available:
<https://www.hancockcollege.edu/mathcenter/index.php>
- **Your Peers.** Your colleagues provide you both academic and social support. You are doing hard work; tough times are best survived when surrounded by friends.
- **AHC Academic Counselors.** Angelica and Christine in the MESA/STEM Academic Success Center are critical to ensure that your Student Education Plan is correct and updated, and provide expert advice on transferring and academic planning.
MESA/STEM website: <https://www.hancockcollege.edu/mesa/index.php?locale=en>
- **MESA/STEM Workshops and C6-LSAMP STEMinars**
MESA/STEM Calendar: <https://www.hancockcollege.edu/mesa/calendar.php>
C6-LSAMP website: <https://www.hancockcollege.edu/mesa/c6index.php>
- **Outdoor Whiteboard.** When the weather starts getting warmer, you may want to study outside. At the end of Fall semester, at Christine's and my request, an outdoor whiteboard was installed to the right of the MESA/STEM Academic Success Center. Please use it!



If you are having difficulties with your classwork, life, etc., get connected as soon as you can. Do not wait until the semester is nearly over. **A small correction now prevents a larger correction (or impossible correction) later in the semester.** Do not feel embarrassed that you do not know how to do something. That is what we are here for – to learn. Put in effort; study; talk about the course material with peers and faculty; ask for help.

One of the most frustrating things for faculty and staff is when students who have potential do not ask for help, or do not put in effort to help themselves succeed. Your education is not a spectator sport.



There are a lot of people who want you to reach your goals. They bring various skills, knowledge and resources to help. Reach out.

STEM Transfer Day at CSUCI

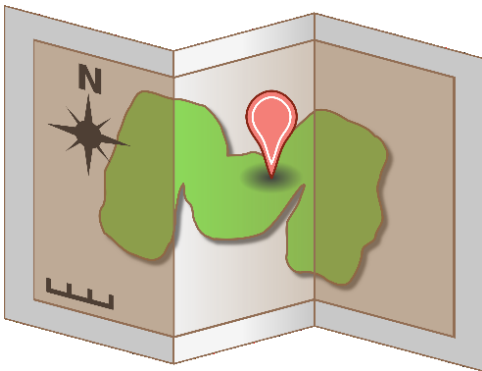
by Angelica Eulloqui, MESA/STEM Counselor

MESA/STEM students visited Cal State Channel Island for their annual STEM Transfer Day event. Students learned about various STEM programs designed to provide academic support and research opportunities for STEM students. CSUCI admissions staff and academic advisors provided presentations with helpful information about transfer requirements, CSUCI STEM majors and campus life. Students were introduced to CSUCI STEM faculty in the areas of mathematics, computer science and engineering. Students visited classrooms, toured labs and learned about the various projects CSUCI current students and faculty are currently working on. Tours included computer science, mechatronics, biology, chemistry and virtual reality health science labs. MESA/STEM students had a great time learning about the programs and connecting with staff, faculty, advisors and current students at CSUCI.



Check Out Our STEM Maps!

by Angelica Eulloqui, MESA/STEM Academic Success Center Counselor



The AHC STEM maps are a great tool for students to learn about the various degree options that can be accomplished at the college. The college provides local AHC degrees and/or Associates Degrees for transfer in all STEM areas. We have developed STEM maps that provide comprehensive information regarding the requirements needed to complete a STEM degree and transfer to a 4-year university. STEM maps help student stay informed and on -track. Since there is not a transfer degree in engineering available, we have created engineering maps that are designed to ensure that students complete all of the required

coursework at AHC in order to be as competitive as possible to Cal Poly, SLO. Although the STEM maps are a great resource we encourage that all STEM students meet with MESA/STEM Counselors, Christine Reed or Angelica Eulloqui to develop a comprehensive student education plan that is catered to the student's major and university transfer goals.

Map are available at <https://www.hancockcollege.edu/pathways/index.php>



The Journey of Furthering My Education at AHC

by Analisa Perez, MESA Student, Biology

My name is Analisa Perez, I am 18 years old, and I am a biology major here at Allan Hancock College, and I started my first semester Summer of 2023 as soon as I graduated from high school. I have always thought I wanted to be a teacher with my degree, however I am now looking into entering a career in the medical field. I have known I wanted to go to college since I was a little girl. I come from a very large family of people who were lucky to graduate high school. Not because of their lack of intelligence or motivation, but simply because of the fact that their generational economic status and lack of access to resources prevented them from pursuing a higher education. As I understood this from a very young age, the idea of going to college, to me, became the epitome of the American dream. Therefore, I made it my mission for the last 18 years, to go full throttle to a four-year university and my family supported me the whole time as I began to pave the way for generations to come and to what the generations before me never had the chance to do.



However, when I did not get into my number one choice university out of high school, I was devastated. I was stuck in the mindset that a university was the only way to accomplish my lifelong goal, however I also did not want to attend a university I felt I would not truly be happy at. I decided to choose my own happiness over the prestige and ego boost of going to a university and attend Allan Hancock College. Although I was hesitant to make the decision, I can confidently say that it was the best decision I could have made for myself. Through Hancock I have been able to take advantage of the smaller, more local campus to get acclimated to the college experience and better achieve my lifelong goal. At Hancock I have been able to use the plethora of resources geared towards first generation students, meet new people, create new friendships, and gain many new work and internship experiences. I am currently on my way to graduate with an associate's in biology from Hancock in spring 2025 and transferring to university in the following fall. I will continue at the university that best fits me and go to school to be a Physician's Assistant after I earn my bachelor's degree in biology.

I am very grateful that I have been able to share my journey in pursuing my higher education thus far. I know many first-generation students, who are determined to live the American dream, often feel as though community college is not an option, or not prestigious enough. If my story could convince at least one person that Allan Hancock College is an amazing place to start the journey of higher education, I would feel forever grateful.

An Unforgettable Class in the Eastern Sierras

by Bryce Miyahara, STEM Learning Laboratory Coordinator



Towards the end of Summer 2024, I was made aware of a geology field-study class being offered in September that would explore the geomorphic history of the Sierra Nevada Mountains over the course of a 5-day camping trip in Owens Valley. For the very reasonable cost of some common school materials, a few camping items (some of which were loaned to us for no charge) and only 2 semester units, I got to experience a class unlike any I had taken before.

The class was a collaboration between Allan Hancock College and Santa Barbara City College, headed primarily by Eiko Kitao, a geology professor at SBCC, and supported by our own geology professor, Feride Schroeder. Volunteer efforts were made by Angus Lewis (as a driver), Terry Taira

(as the campground cook), and SBCC professors Jeff Meyer and Jan Schultz (as guest lecturers). Their combined efforts ensured that the trip ran smoothly for all 18 students that got to go on this trip, including myself.

Before we left AHC early in the morning on September 18th, we were given a guidebook that we were assigned to fill out and add notes to at each lecture stop. We spent much of the first day in transit (the entire class fit into 2 Suburban and 1 van), and we had a total of 5 lectures as we traveled northeast towards Owens Valley. After setting up our tents in Tuttle Creek Campground, we assisted Terry in making dinner, awe-struck at the sight of a brilliant full moon bathing us in orange light as it rose over the Inyo Mountains to the east. After dinner, we assisted Terry in clean-up before returning to our tents to study until lights out at 10 p.m.



For the rest of the trip, we began each morning by packing our lunches, cooking and eating breakfast, taking a quiz on the previous day's material, and then listening to a lecture before piling into the vehicles. We continued to average about 5 lectures per day (save for the last day where we only had 1). Each lecture stop brought us to a new location with a new topic; and by cycling who gave the lecture between Eiko, Jeff, and Jan, we got exposed to 3 unique teaching styles to help keep us engaged. We got to see and learn about the history and cultural significance of several beautiful lakes, such as Convict Lake and Mono Lake, and we also got to take home obsidian and pumice from Lookout Mountain.

We'd spend the whole day at lecture stops before returning to camp around 6 p.m., where we repeat our nightly routine of cook, clean, and study; and then do it all again the next day. When we returned to AHC in the evening of September 22nd, we submitted our guidebooks for grading, and a few weeks later, got them back to study for our final exam.

This was the first time in a while that I had either camped or taken a class, and I enjoyed every day of it. I seriously advocate for the continuation of the field-study program at AHC, and I highly recommend that students enroll in the next one, regardless of their major.



Check Out Your MESA/STEM Academic Success Center (M500)



Features include:

- STEM Study Center** with student-use computers and project completion tools
- STEM Learning Lab** including comprehensive STEM tutoring services and supplemental course material resources
- STEM Collaborative Classroom** for small group study and instruction
- STEM Student Decompression Lounge** when it is time to take a break
- STEM Onsite Academic Counseling** available to meet the academic and career planning needs of STEM students at Allan Hancock College

Fall 2024 MESA/STEM Academic Success Center Activities

- Sept. 5— Industry Coach “Meet & Greet” (12 - 2 p.m., 4:30 - 6 p.m.; M-502)
- Sept. 11— Industry Coach “Meet & Greet” (5 - 7 p.m.; M-502)
- Sept. 12— Industry Coach “Meet & Greet” (12 - 2 p.m., 5 - 7 p.m.; M-502)
- Sept. 13— “Start Here” MESA/STEM Student Convocation— (11 a.m. - 12 p.m.; Zoom Link - 828 4545 3174)
- Sept. 27— Scholarship Strategies for STEM Students (3 - 4 p.m.; M-502)
- Oct. 11— STEM Transfer Day at CSU Channel Islands
- Oct. 18— California Central Coast Community College Collaborative (C6) & Cal Poly Summer 2024 Research Symposium
- Oct. 21— Industry Coach Presentation (1-2 p.m.; M-502)
- Oct. 24— Industry Coach Presentation (6-7 p.m.; M-502)
- Nov. 1— UCSB Smithsonian Scholarships Program Presentation (12 – 1 p.m.; M-502)
- Nov. 15— SB Foundation Scholarship and FAFSA workshop (1:30 - 3 p.m.; M-502)
- Nov. 23— 25-Year Reunion Celebration of MESA at AHC (5 - 7 p.m.; ARC Patio)
- Dec. 6 - UCSB Smithsonian Scholarships Program Presentation (11 – 12 p.m.; M-502)
- Dec. 6— Internship Strategies Workshop (3 - 4 p.m.; M-502)
- Dec. 12-13— Overnight Field Trip (Central Valley High-Speed Rail Authority tour & UC Merced)

UC/CSU Application Workshops — APPLICATIONS DUE NOVEMBER 30, 2024

- Oct. 4— UC/CSU Application Workshop (12 - 2 p.m.; M-311)
- Oct. 4— UC Admission Application Personal Insight Question Workshop (2 - 3 p.m.; M-311)
- Oct. 25— UC/CSU Application Workshop (11 a.m. - 1 p.m.; M-311)
- Oct. 25— UC Admission Application Personal Insight Question Workshop (1 - 2 p.m.; M-311)
- Nov. 8— UC/CSU Application Workshop (12 - 2 p.m.; M-311)

Pre-recorded MESA/STEM Workshops are available on our website at

<https://www.hancockcollege.edu/mesa/mesasteminars.php>



The Mathematics, Engineering, Science Achievement (MESA) Program

is an academic program that provides a wide range of support services and activities aimed at fostering student achievement and increasing the success and participation they experience while pursuing a degree in mathematics, engineering, computer science, biology, architecture, kinesiology, or other science-based programs. MESA enables students to prepare for and graduate from a four-year university with a math-based degree. It also seeks to increase the diverse pool of transfer-ready community college students who are prepared to excel as math, engineering and science majors. Through the program, students develop academic and leadership skills, increase educational performance, and gain confidence in their abilities to compete academically and professionally. Visit our website at www.hancockcollege.edu/mesa.

