



MESA Milestones

Featuring momentous affairs of the MESA program at Allan Hancock College

Fall 2021

NASA DART Mission – Big Showing at AHC!

by Christine Reed, MESA/STEM Counselor/Coordinator

This is super exciting, folks! Cancel your Thanksgiving travel plans for this one if you were planning to skip town early. NASA is planning to spend that week with us! NASA's DART Mission team will be at Allan Hancock College on November 20, 22 and 23, complete with a NASA Lunar Sample and Meteorite Certification Workshop for our local high school science teachers on Saturday, November 20 in our MESA/STEM Academic Success Center; a NASA DART Expo in G106 on Monday and Tuesday; a plethora of workshops and classroom presentations offered throughout both days, a community presentation on Monday evening, and a launch viewing late Tuesday night. The Expo, workshops, and community presentation is open to all AHC students, employees, and community members.

Workshop topics include:

The Double Asteroid Redirection Test (DART) mission, directed by NASA, is a planetary defense-driven test of technologies for preventing an impact of Earth by a hazardous asteroid. DART will be the first demonstration of the kinetic impactor technique to change the motion of an asteroid in space. For more information visit <https://www.nasa.gov/planetarydefense/dart>

The Italian Space Agency and the LICIACube Satellite – Simone Pirrotta, ASI

Launching with NASA's DART mission aboard a Falcon 9 rocket from Vandenberg Space Force Base will be the Light Italian Cubesat for Imaging of Asteroids (LICIACube) from Italy's Space Agency (ASI). Prior to the DART spacecraft's impact on Dimorphos, the moon of the asteroid Didymos, LICIACube will separate from DART to observe and record the effects of DART's impact. Dr. Simone Pirrotta, Program Manager for LICIACube, will provide an overview of LICIACube, the Italian Space Agency, and the exciting and important partnership between NASA and ASI.

NASA Planetary Missions – Brian Mitchell, NASA Marshall Space Flight Center

NASA missions are currently exploring incredible worlds across our solar system. New missions of exploration to fascinating, new destinations are currently being planned. Amazing images and scientific data from all of these missions is being made available to students and the general public. Brian Mitchell, Education and Public Outreach Manager for NASA's Planetary Missions Program Office, will provide a description of NASA's current and future adventures (including DART) among the planets, moons, and asteroids of our Solar System.



Student Exploration of Space with GAVRT – Ryan Dorcey, Lewis Center for Educational Research

The Goldstone Apple Valley Radio Telescope (GAVRT) provides a unique opportunity for K-12 students and their teachers to conduct real research throughout our Solar System and far across the universe. This partnership between the Lewis Center for Educational Research (LCER) and NASA's Jet Propulsion Laboratory allows classrooms to take remote control of the giant 34-meter DSS-28 dish antenna at NASA's Goldstone Deep Space Network location and work directly with leading researchers. Ryan Dorcey, LCER Director of Information Technology and Global Programs, will provide an overview of this exciting program.

Conducting Your Own Explorations with NASA's Solar System Treks – Brian Day, NASA SSERVI

NASA's Solar System Treks project (<https://trek.nasa.gov>) produces a suite of online, interactive visualization and analysis portals. These tools enable mission planners, planetary scientists, students, teachers, and the public to view and explore the surfaces of worlds across the Solar System as seen through the eyes of a wide range of instruments aboard a variety of past and current missions. As we tour the Solar System in this presentation, you will get an introduction to the portals and how you can use them to follow NASA missions and conduct your own explorations of exotic, distant worlds. Brian Day, Deputy Staff Scientist for NASA's Solar System Exploration Research Virtual Institute (SSERVI), will introduce using NASA's Solar System Treks from your school or home.

A Hard Rain's Gonna Fall – Protecting Earth from Killer Asteroids – Brian Day, NASA SSERVI

Throughout the entire history of life on Earth, we have been at the mercy of the deadly impacts by rocks from space. Just ask the dinosaurs! However, these events are not relegated to Earth's distant past. Each year, Earth experiences multiple near misses by asteroids and, as in the case of the Chelyabinsk event of 2013, sometimes takes a direct hit. But now, for the first time in the entire history of life on Earth, the DART mission will demonstrate that we have the capability of doing something about it. In this talk, Brian Day of NASA's Solar System Exploration Research Virtual Institute (SSERVI) will examine the threats posed to us by NEOs, explore strategies and technologies to mitigate these threats, and look at ways in which the amateur astronomers and the public can help save the world.



Hope you will be able to join us for this amazing opportunity!

<https://www.hancockcollege.edu/nasa/schedule.php>



MARK YOUR CALENDARS

MESA/STEM ACADEMIC SUCCESS CENTER

GRAND OPENING & RIBBON CUTTING

MARCH 8, 2022 3PM



Reach Out! It is OK to Ask for Help

by Priscilla Perez, STEM Student, Mechanical Engineering

Hi, my name is Priscilla and I'm currently a student worker at the new MESA/STEM Academic Success Center. I assist students in finding the help or information they need, help organize files and information, and make sure everything stays wiped down during these times.

If you told me I would end up working here in high school I would've had no trouble believing it. I love STEM and it would make sense to work in the same center where I would study. I'm honestly more surprised now though. I graduated from high school with over a 4.0 GPA and made the Honor List. At some point when I was younger I thought that since my brother was good at sports (he was the athletic one) I had to be good at school instead (I would be the academic). All through elementary, middle, and high school I kept my grades up and would email teachers about what I needed to do to get A's in their class to make the honors list. I was more concerned about getting A's than my parents were actually. I boxed myself into this idea that I had to be, or could only be, smart or at least seen as smart, so I surprised myself by making the volleyball team all four years of high school, swim twice, and attempting to be a part of the wrestling team for a week. I was an academic who also loved athletics. I did well in all my classes, but I loved my math and science classes because they were more challenging. The feeling of finally understanding a problem and being able to solve it was unmatched. Despite being so high at the top of my class, I didn't apply to any universities, and even applied to Hancock later than I should have. I knew I wanted to further my education, but I didn't quite know what I wanted to do. I eventually met with a counselor over summer where I told them I was interested in the STEM field. I decided to pursue engineering.



College level STEM courses were a wakeup call for me. My first semester was CHEM 150, MATH 182, and SPCH 101, and I started my first job at Marshalls. Chemistry in high school was fun and came pretty easily to me; however, chemistry in college was interesting and had me up until five in the morning completing assignments. Math was my favorite subject in high school (even AP calculus), but college level calculus 2 had me up crying at three in the morning studying. I missed the structure and pace of high school, but, with the new level of struggle, came an increased satisfaction when I had an "Aha" moment or got an "A" or "B" on a test. I always felt I had earned my grades, but now I **really** felt I earned them. As I continued to my higher-level STEM classes I also noticed a decrease in the number of women in my classes and would always make friends with them.

I finished two years at Hancock with good academic standing (all A's and B's one C), but entering into my third fall at Hancock, I felt burned out. I was concerned about taking my hardest semester of courses, I was having trouble paying attention to my zooms, and my home situation wasn't the best place to be. After the first week of that semester I dropped all my classes. It fixed the stress I had about doing bad that semester, but home life still sucked, and now I felt I was a failure. My engineering teacher, Dom, took notice and sent an email simply asking how I was. I didn't reply, but I thought a lot about what I would say the whole time I took off from school. Looking back now I still regret dropping, but I also doubt I would have done well in the environment that I was in.

When January 2021 rolled around I still hadn't signed up for classes. I knew that if I wanted to continue school, I needed to sign up. I just wasn't sure I felt ready. A few days later my hand got smashed in a door. Since classes were still online and my hand was out of commission I decided that was my sign to take another semester off.

When June came I decided I needed to go back now, or maybe I never would. I signed up for some general education courses. I needed to ease my way back into school and studying. Unfortunately, the day before school started, my home life became the worst it had ever been. Me, my mom, and little sister and brother packed up our things and went to my

Nana's for a few weeks. We eventually went back to our house, but the night I returned my dad was put in an ambulance from having a seizure due to alcohol withdrawal. Two weeks later he would kick me out and break my laptop, which I used for school, because I told him not to drink and drive. I was still able to finish out the semester at my Nana's and with a laptop I was able to borrow from the school. My Nana's wasn't a great place to be either and I surprised myself by going home again for fall classes.

When I signed up for classes in the fall (the same exact classes I was supposed to the year prior) I felt I could finally reply to the email Dom had sent to tell him that things happened and that they weren't exactly better, but I was excited to be back in class again. He encouraged me to apply for the ENGAGE scholarship for STEM majors, which I was hesitant about because I had taken a year off. I didn't feel I deserved it. I decided to try thinking that I had nothing to lose from trying. To my surprise, I got it. I felt like I didn't deserve it. I was so optimistic for my first fall semester back. I was so excited to learn. Classes were hard and things were still not great at home. I felt like I couldn't focus on school, so I started to skip classes, which only made things worse. I came to a point where I was just so sad and felt so hopeless I just figured I would drop my classes again and that would be the end for me. Dom took notice again and sent an email asking if I was okay. I was, in fact, not okay and let him know that. He asked if the school could help and recommended that I talk to a counselor. I did meet with a counselor the next day not expecting much to come from it, just my apology that I don't think I could do it anymore. That meeting helped in a way that I didn't know that it could, and I'm still blown away by it. I got so much support. Christine helped come up with a plan for different classes for this semester, set me up with a therapist, got me set up working in the MESA/STEM center, and encouraged me to continue with the ENGAGE meetings. I feel like I have so many people in my corner now, encouraging and rooting for me. I don't think they know how much they helped me. I was in such a dark place and now I feel like I can finally breathe. I honestly still feel like I don't deserve it, but I'm working on that, and am focusing on doing my best. If you're feeling unsure about anything I would recommend talking with a MESA/STEM counselor. They can help in so many ways.

ENROLL IN STEM 100

Success Strategies in STEM

- Learn about career options in STEM
- Develop effective learning strategies in STEM
- Plan academically using college resources
- Network within the STEM discipline



Don't delay! Now is the time to invest your time and energy into securing 2021/2022 scholarships and summer 2021 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 Centers for assistance. Make it happen for yourself. You will never regret it!

Managing Your Academic Behavior (and not annoying your professors)

adapted from <https://universitysurvival.com/student-topics/avoiding-things-that-drive-faculty-crazy/>

Do you think grades are unbiased? Don't be naive. Grades are decisions professors make based on a variety of factors. Certainly "scores" on performance measurements such as assignments and exams have an objective component, but don't fool yourself into thinking there are not subjective factors as well. Faculty have considerable discretion when issuing grades. Many times, a professor's perception of you is built upon things that they see you doing or not doing. Learning to manage your "academic behavior" and incorporating respectful and professional conduct can go a long way in your GPA and career opportunities in the future.

Avoid these choices:

- **Being late for class routinely** – Professors, most times, are understanding of lateness once in a while. If tardiness is a constant behavior you are engaging in, prepared for consequences in your grades and the professional respect others have for you.
- **Skipping class and then asking for help** – Choosing to not attend class is a decision you make; thus, it is your responsibility to catch yourself up on missed material and assignments. Avoid asking your professors to make up for your choice of not attending class time.
- **Scheduling a time to meet with your professor and then not showing up** – By engaging in this behavior, you are, not only, not respecting your professor's time, but not allowing other students the opportunity for time with the professor.
- **Not reading or responding to emails sent to you by your professors** – Professors send important information to their students through email. Make sure to check your email accounts regularly and respond professionally. ALWAYS.
- **Communicating with your professors too casually** – Your professors are your professional contacts, not your friends. Do not communicate with them as you would text a friend. It is unprofessional and can skew their perception of you. Communicate through email (it is the professional platform) and your writing should reflect a level of formality that is professional in nature.
- **Being sloppy in your work** — Sloppy work communicates "I completed this last minute" or, worse "I don't care about this." Professors respect tidy work that is easy to grade and shows you are about learning.
- **Complaining about your grades** – You will gain very little when you engage in whining about your grades. Investigating mistakes and learning from them is a respectful behavior. Complaining or arguing over their assessment of your performance can compromise their opinion of you.
- **Showing up unprepared for class and/or meetings** - Being unprepared for class and/or meetings with your professor communicates complacency. Many of your professors want to help their students, but you need to show up prepared. Students who show up without doing their part in preparedness are demonstrating disrespectful for their professor's time.



Managing your academic behavior comes down to a common theme - be respectful – how we all deserve to be treated.

My Thousand Miles

by Esteban Perez, MESA & ENGAGE Student, Electrical Engineering

Ever since I was young child, I was always fascinated by math and science. I always pictured myself to be an Engineer or a Scientist. In my mind, I was going to develop something that would change the world. Somewhere along that path I took a drastic deviation. I'm not quite sure why I went down the path I did, but I feel it had something to do with my emotional state. I hung out with the wrong people and engaged in very poor choices. Long story short, after many years of Rehab and counseling, I finally had a normal life. I was a manager of a fast-food restaurant; I had gotten married and had five kids. Everything seemed to be ok.



When I was about 32 years old, I hit a pivotal moment in my life. I questioned where my life was heading. Am I living life to my potential? What kind of legacy do I want to leave my children? The truth is for many years I had convinced myself that I would not amount to much. The drugs had ripped away the ambition I once had as a child. I was completely terrified to make such a drastic change in my life but in that moment, I knew what I had to do. I quit my job and signed up for college, and I have been taking classes ever since. When I started here at Hancock, I didn't even have a High School Diploma, I had to start with my GED. In fact, I was originally told by a counselor that I wouldn't be able to be an Engineer because I would have to take 6 semesters worth of math, yet here I am. They say a journey of a thousand miles begins with a single step. Sometimes, you just need to take a leap of faith and make that first step. I apply for university transfer this year in Engineering!

Inspired to Help Others

by Meganne Stout, MESA Student, Biology



I have loved Biology and science since I was very young and it was always one of my favorite things to learn and do in school. I have always known that I wanted to go into STEM and I am happy that I have pursued it and have made a commitment to my education and future career that is based in STEM. I also have always known that I wanted to go into a medical field, I just could not decide what medical field. I either want to go into Veterinarian medicine or human medicine. Over the past couple years, I have gone through a number of medical issues that has pushed me toward human medicine because I want to be the doctor that helps someone finally see the light at the end of the tunnel.

Hancock has instilled a strong foundation in my college education, that I believe has prepared me to succeed once I transfer. The MESA program has also helped me immensely in this part of my life. Providing many things that have helped me succeed in my classes. I plan on transferring Fall 2022 to the University of Las Vegas, Nevada. There I plan on earning my bachelor's degree in biology, and hopefully continue my education at the medical school of medicine or go to a Veterinarian program where I will learn to care for animals and help them.



Great Minds in a New Setting

by Bryce Miyahara, STEM Learning Lab Coordinator

Getting to see the students use the new center for the past month has been an enriching experience. They immediately took to the new space so intuitively that it was as if they had already been using it for years. They've been using all of our amenities properly, including the refrigerator, the lockers, the computers, and of course our tutoring to name a few. I especially love seeing them use the mobile white boards to teach each other and solve problems together.

I must also commend them on their patience as we continue to make improvements to the center. Some students even offer suggestions on additions we can make, which is always welcome.

So far, the foot traffic through the center has been very manageable, and we could certainly stand to see some more new faces stop by. So please, invite a friend to come study some STEM with you here in M-500!

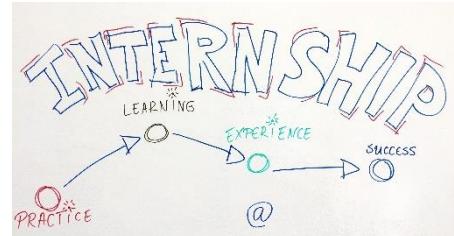
Landing a STEM Internship

by Angelica Eulloqui, MESA/STEM Counselor

It is never too early to begin the internship exploration process, but you might be wondering, what is an internship and why should I be thinking of getting one?

An internship is professional learning experience that gives you the opportunity to gain work related experience in your career field. Internships provide a student the opportunity for career exploration and development, and to learn new skills.

So what steps should you be taking to land a STEM Internship?



1. Begin your search early in the academic year (fall semester) to land a summer internship

- Most internships, not all, are held during the summer
- Summer internships usually have application deadlines early on during the spring semester
- Check your emails regularly, your instructors and MESA/STEM will send you information about STEM internship opportunities
- Attend STEM internship strategies workshop hosted by MESA/STEM
- Utilize the STEM Internship Toolkit*

2. Identify internships for which you are interested in applying

- Review internships requirements
- Maintain a running list of internship application deadlines
- Prepare required materials - this can include: application, resume, cover letter, transcripts, letters of recommendations

3. Tap into your support network

- Instructors, counselors and staff are here to support you with this process
- Develop a positive relationship with your support network - most internships will require you to submit letters of recommendation and your support network can help!

4. Apply!

- Believe in yourself and stay confident throughout the process
- Prepare your applications and submit all required materials

*STEM Internship Toolkit - <https://www.hancockcollege.edu/mesa/mesainters.php>

Fall 2021 MESA/STEM Activities

Sept. 17— “Start Here” MESA Program Convocation—mandatory for all MESA students (2:30pm-4:00pm; Zoom)
Sept. 24— STEM Academic Strategies: Setting Yourself Up for Success (2:30pm-4:00pm; Zoom)
Sept. 29— UC Admission Application Personal Insight Question Workshop (1:00pm-2:00pm; Zoom)
Oct. 1— FAFSA Application for 2022-2023 opens on Oct. 1, 2021!
Oct. 8— Scholarship Strategies for STEM Students (2:30pm-3:30pm; Zoom)
Oct. 12— CCC College Fair - North (12:00pm-2:30pm) — contact the AHC University Transfer Center
Oct. 13— CCC College Fair - Evening (5:00pm-7:00pm) — contact the AHC University Transfer Center
Oct. 14— CCC College Fair - South (12:00pm-2:30pm) — contact the AHC University Transfer Center
Oct. 22— UC Admission Application Personal Insight Question Workshop (1:00pm-2:00pm; Zoom)
Nov. 19— Santa Barbara Foundation Scholarship and FAFSA workshop (1:30pm-3:00pm; Zoom)
Nov. 22-24— NASA Planetary Defense DART Mission Launch Event
Dec. 3— Internship Strategies Workshop (2:30pm-3:30pm; Zoom)

UC/CSU Application Workshops — APPLICATIONS DUE NOVEMBER 30, 2021

- Oct. 1— UC/CSU Application Workshop (1:00pm-3:00pm; Zoom)
- Oct. 15— UC/CSU Application Workshop (11:00am-1:00pm; Zoom)
- Oct. 29— UC/CSU Application Workshop (1:00pm-3:00pm; Zoom)
- Nov. 10— UC/CSU Application Workshop (9:00am-11:00am; Zoom)

Zoom meeting ID for all workshops: 976 9930 2444

MESA/STEM Academic Success Center Grand Opening & Ribbon Cutting Ceremony will be held March 8, 2022 at 3pm.

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.

