



The Mathematics, Engineering, Science, Achievement (MESA) program focuses on initiatives to improve diversity and retention of historically underrepresented students in the STEM fields, including African American, Latinx/Hispanic, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, and women students.

EQUITY

We believe that race and gender should not be predictors of STEM educational outcomes.

ACCESS

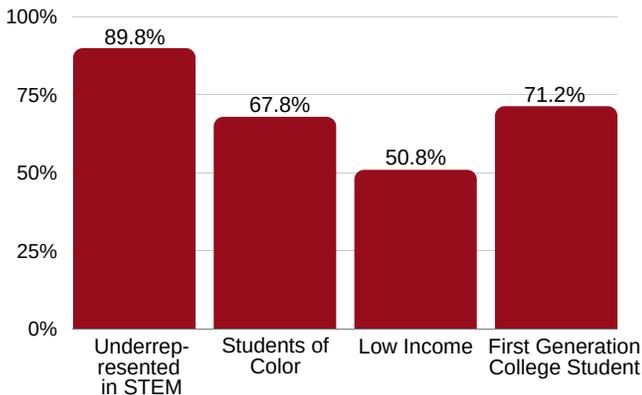
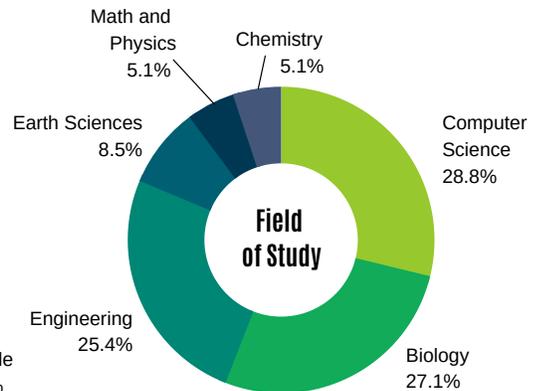
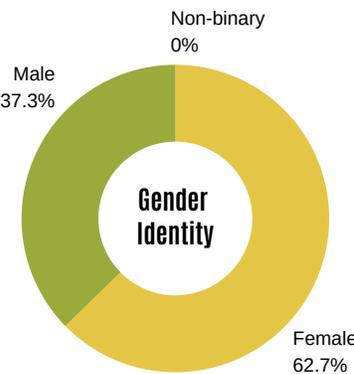
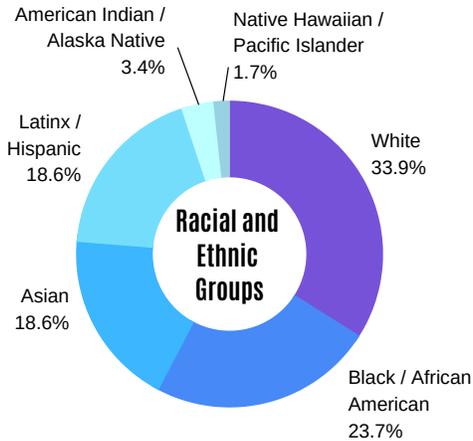
MESA students will have access to opportunities that will academically and professionally develop them into competitive STEM transfer students.

COMMUNITY

Together, we will build and be part of a community that empowers each other.

WHO WE SERVE: MESA STUDENTS

During the 2019-2020 academic year MESA served 59 students. Below are MESA Student demographics.



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WELCOME

We would like to start this newsletter with an acknowledgement of the land Edmonds College (EC) occupies. We acknowledge that we are on the ancestral land of the Coast Salish People, specifically the Snohomish People. May we always honor the Indigenous people of the land we are on - past, present, and future, wherever we go.

Thank you for your commitment to dismantle institutionalized racism, sexism, and other systems of oppression that our students face every day. If there is one thing that 2019 - 2020 has taught us, it is the need to do just this; for people to come together and take action to denounce and dismantle systems of oppression, specifically racism. Together faculty, staff, partners, and community can continue to come together to remove the barriers our historically underrepresented students face in their academic and career development. For some of you, this will be your first time learning about diversity, equity, and inclusion student support programs. We hope you take the time to grow within yourself and take action to create change.

This Community Review highlights a few MESA events, MESA resources, and most importantly, the students we serve. MESA students are leaders on and off campus, with powerful dreams to solve some of the world's most pressing problems. We are honored to have the opportunity to empower students, close equity gaps, and increase access. We thank you for your continued support and we look forward to the change 2020 - 2021 will bring.

TAKING ACTION TO ERADICATE ANTI-BLACK RACISM: UPDATE

In the Spring 2020 newsletter, we talked about how MESA was taking action to eradicate anti-Black racism at Edmonds College. We have been working to develop and continue programming based on students, staff, and faculty's recommendations and additional needs due to COVID-19 to best support and empower students. We have many ideas, short and long term, to create change. Three of them we are working on include:

- Developing workshops for students to teach them about racism, microaggressions, and anti-racism.
- Using our social media platforms to elevate Black voices and contributions in STEM. #AmplifyBlackSTEM, #citeBlackSTEM, #citeBlackwomen
- Work to support and help establish affinity based clubs such as the National Society of Black Engineers (NSBE).

While this is still a work in progress and there is much to be done, we are excited to continue to be part of a movement to create the change that has been needed for decades.

#BlackLivesMatter

MESA EVENT HIGHLIGHTS

UW Physics Slam: Fall 2019

“

UW Physics Slam was the start of my school year and really helped me confirm my interest and passion for science.”

-Zambak, MESA Student, Civil Engineering



MESA students and staff at the Physics Slam.

MESA STUDENTS CREATE CHANGE

Brenda

Brenda has made major contributions to Edmonds College serving as the Associated Students Executive Officer for Administration by ensuring that all student voices are being heard. On several occasions, she has challenged leadership on their perspectives and actions that have negatively impacted students. She actively advocates for students at every level and is a strong voice on campus. Some of Brenda's major contributions to campus has been organizing Safe Space Chats for students in support of Black Lives Matter, helping secure funding for scholarships and the new Hazel Miller building, advocating for Services and Activities Fees to be equitably distributed, and speaking with policy makers in Olympia about financial aid reform.



Brenda, MESA student and Executive Officer for Administration.

Brenda will be transferring to UW Seattle this Fall to pursue a Bachelors degree in Informatics. By combining her technical and interpersonal skills, she hopes to lead teams in developing innovative solutions to empower people around the world. She truly believes that education is the gateway to opportunity and success, and has worked endlessly to ensure that students, regardless of their race/ethnicity, gender, and socioeconomic status can have access to it Edmonds College. Brenda has been an integral part of the MESA family and we will miss her vibrant personality and consistent advocacy. #BlackExcellence

VISTA AMERICORPS IMPACT

Access, Community, Equity (ACE) Initiative

In 2019, MESA was awarded an AmeriCorps VISTA position to expand and enhance MESA programming through capacity building activities and connections with partners. In August 2019, VISTA member Megan joined MESA as the Access, Community, Equity (ACE) Program Coordinator.

During her year of service, Megan contributed to many MESA activities, services, and resources. Some highlights from the service term are listed below.

- Megan developed several key systems to streamline and build MESA's capacity. These include the Internship, Scholarship, and Conference Database, Lending Library, COVID-19 Resources, and a new sign in system for the MESA Student Center.
- Megan also contributed to funding requests for MESA Scholarships and STEM conference travel, resulting in an additional \$16,000+ to support MESA students.

One of the key goals of the ACE Program is to build sustainable partnerships with industry and university partners to increase access to opportunities. Megan began this process by developing and supporting collaborative events with partners on and off campus. Collaborative events included the Winter Internship Fair with the Edmonds College Career Action Center, Boeing factory tour and career panel, MESA Transfer Connections Events, and various campus tours.

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"It's been an honor serving and getting to know MESA students this year. I hope the projects I've developed endure and support MESA students for years to come!"

- Megan, VISTA Member



2019-2020 VISTA Member Megan holding a mini racing drone.

TRANSFER STUDENT SPOTLIGHT

Beatrix

What university will you be transferring to?

University of Washington

Major?

Computer Science at the Paul G. Allen School of Computer Science

What clubs for organizations were you involved with at Edmonds?

I was active in the EdCC Rocketry Society my entire time at Edmonds. I was also vice-president and president for a while. The people in that community were awesome, and they helped me branch out into different areas of engineering and engineering technology. For example, I learned how to use equipment like the 3D scanner, 3D printer, laser cutter, filament winder, and wind tunnel. This experience allowed me to become the EdCC Wind Tunnel Technician for the 2019-2020 school year. Also, my second year at Edmonds I joined MESA, which helped me find an empowering community of women interested in STEM like myself. It grounded me and assured me that I was on the right track. Moreover, since I grew up in Singapore, I had a lot of fun attending events hosted by Bridges International Club and Talk Time Edmonds to meet new friends from all over the world.

What advice do you have for new students?

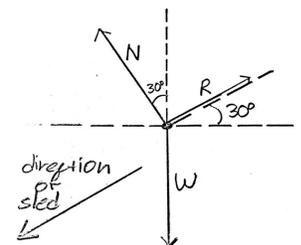
Find a community that inspires you. A community that stimulates you to pursue anything and everything you're interested in. A community that empowers you to succeed academically. Don't stop until you do. There's one out there for everyone and finding it is invaluable.

How has MESA impacted you with your transfer journey?

The best thing about MESA is that it gives you hope. You have hope for your future in STEM because you see other people like you, of the same gender or race, pursuing it too. The people and staff in MESA also introduce you to all the resources that are out there to help you succeed. You can come in with an open mind and you'll be helped to figure out your passions, or you can come in with a goal and you'll be helped to figure out a plan.



Beatrix ready to transfer to UW Seattle in the Fall.



Model of dual sled from physics research project in 2019 (left) and free body diagram of forces acting on sled (right).

MESA SCHOLARSHIPS

Year Overview

In 2018, MESA began offering scholarships to MESA students for tuition and fees, books and supplies, university application and conformation fees, and conference fees. These scholarships helped relieve some of the financial stress many historically underrepresented STEM students face. Additionally, MESA Scholarships are open to non-resident and undocumented students, who are systematically excluded from many scholarships and financial aid opportunities.

For the 2019-2020 academic year, we only had about half of the funding available we had the prior year due to limited funding.

\$181

Awarded for
Books
and Supplies

\$698

Awarded for University
Application and
Confirmation Fees

\$11,909

Awarded for
Tuition
and Fees

Additional Unmet Needs

Many MESA students struggle to meet their educational and daily needs. Students go without buying textbooks because they are expensive and many students skip meals because they don't have money for it. MESA's budget restrictions does not allow for scholarships for certain needs including direct rent assistance, groceries, clothing, and childcare. By donating to MESA through the Edmonds College Foundation, you can designate funds for student scholarships. Donated funds do not carry the same restrictions and will be used to meet a variety of student's essential needs. Though other resources are available at Edmonds, some are limited in scope, amount, or have additional barriers for underrepresented students to access. In our end of the year survey, this is what students indicated they wish MESA had scholarships for:

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"Any scholarship I qualified for would make a significant difference. My household is single-income, and sending me to school puts a significant strain on it."

"Rent, I was working full time and struggling to maintain my grades. Now that I've been laid off due to COVID-19, I worry I will not be able to support both school and my expenses."

"As an independent student I always wish MESA has a rent scholarship program."

"Access codes because I think I have spent more money on those than books and usually for many courses."

"Honestly, I wish MESA could cover rent. I know most of us struggle alot trying to raise rent while focusing on these hard stem classes."

You can make an impact in closing the equity gap and empowering students by donating to MESA Scholarships through the Edmonds College Foundation. Even \$5 a month makes a difference!

NEW MESA STUDENT CENTER

The MESA Student Center is moving! For almost a decade, many MESA students and partners have advocated for the MESA Student Center to move into a larger space that met students needs. Thanks to this student advocacy, the MESA Student Center will be moving to the Hazel Miller Building and have over 3 times the capacity of the previous centers. Without the passion, drive, and dedication of MESA students, the MESA community and future generations wouldn't have this space dedicated to serve and empower historically underrepresented students at Edmonds College.

2019-2020

MAKE AN IMPACT

Staff and Faculty

- Include MESA in your syllabus and Canvas pages.
- Request for a MESA staff member to come to your class to talk about MESA.
- Use a MESA Virtual background on Zoom.
- Talk to your students about MESA multiple times throughout the quarter.
- Send MESA opportunities students might benefit from.
- Attend MESA events and connect with students.
- Donate to MESA Scholarships through the Edmonds College Foundation. Employees can set up automatic donations and even \$5 a month makes a difference!

Industry and Community Partners

- Monetary Donations: Donate to MESA Scholarships through the Edmonds College Foundation.
- Internships: Provide the opportunity for MESA students to gain hands on experience.
- In-kind Donations: Provide resources for students in need. Donate non-perishable foods, school supplies, calculators, laptops, or other equipment.
- Site Visits: Inspire students by sharing the impactful work you are doing.
- Mentorship: Empower MESA students by sharing your story.



The MESA Student Center in Mukilteo Hall filled over capacity with students.



VISTA
Whatever it Takes to America



MESA
Mathematics
Empowering
College
Achievement
EDMONDS COLLEGE

TRANSFER STUDENT SPOTLIGHT

Vanessa



"I will be attending the Paul G. Allen School of Computer Science and Engineering at the University of Washington where I will be pursuing a Masters degree in Computer Science.

While at Edmonds College, I was involved with MESA, the Society of Women Engineers (SWE), and the Engineering Peer Mentors program.

The best advice I could offer new students is that an organized routine with set times for studying, homework, and personal tasks is crucial to a successful experience while also preparing you for life in the real world.

MESA had a huge impact on my performance at Edmonds College. Without MESA I feel like I would have had less knowledge of opportunities around me and I would have missed out on all the amazing friendships that I gained from simply being in the MESA student center."

Vanessa also worked on a physics project exploring the connection between Artificial Intelligence, prosthetic limbs, and aerodynamics. This project originally started as a simple aerodynamics experiment using the Edmonds College wind tunnel but grew to encompass Vanessa's growing passion for connecting neuroscience and artificial intelligence. The project explored aerodynamic characteristic drag and algorithmic feedback loops needed to teach a prosthetic arm to accurately throw an object. Vanessa and her research team developed a research poster and planned to present at the UW Undergraduate Research Symposium. She hopes to further explore this passion at UW.



Image of trajectory model from Vanessa's poster.

MESA EVENT HIGHLIGHTS: CONTINUED

Boeing Tour: Fall 2019

In November 2019, MESA staff collaborated with the Boeing Future of Flight program to tour the Everett Boeing plant. MESA community college students from Edmonds, Seattle Central, Highline, and Everett Community Colleges joined for an afternoon of learning about manufacturing Boeing passenger airplanes and the innovation that happens behind the scenes.



"The educational tour to Boeing was a great experience. I learnt so much about the different planes that Boeing has and the things that make the planes unique. My personal favorite was the dreamliner which is the cargo plane used to transport other parts of the planes. I learnt that Science is an evolving process and we cannot simply be content with where we are technologically. We have to challenge ourselves and find easier ways of solving problems and making work easier."

-Brenda, MESA Student, Informatics

Holiday Community Potluck: Fall 2019

Students gathered with friends and family to celebrate the end of fall quarter during the MESA Holiday Community Potluck. Students brought food to share and had the chance to practice building and flying mini drones. MESA student Gio was the first to complete the drone race course!



MESA Students, friends, and family at the Potluck.

NEW OPPORTUNITIES: AFFINITY BASED CLUBS

For year two of the Access, Community, Equity (ACE) Initiative, the new incoming VISTA member will be working on four main projects, one being working with students to help them establish and lead affinity based STEM clubs on campus. There are very few affinity based clubs on campus and by helping build these clubs, students will have the opportunity to embrace and celebrate their identities within STEM, while connecting them to high impact resources. We have received funding to take some students to some these affinity based clubs and we are excited to connect students to these empowering organizations. If you want to get involved, let the MESA Director know!

- American Indian Science and Engineering Society (AISES)
- Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)
- National Society of Black Engineers (NSBE)
- Society of Hispanic Professional Engineers (SHPE)
- Society of Women Engineers (SWE)

TRANSFERRING STUDENTS

MESA Transfer Journey Impacts

MESA Director

Hi All! How has MESA impacted your transfer journey?

Brenda, Infomatics @ UW Seattle

The whole of MESA helped with my personal statement. Everyone made sure that it was good and presentable. I was also encouraged every time I doubted myself.

Dagim, Software Engineering @ Undecided

MESA has been a tremendous support for me both financially and academically but most importantly the resources and supports provide by the director and advisors were very helpful and I couldn't see myself reaching to my plans so smoothly, if it wasn't for the help I got from this people.

Nat, Electrical Engineering @ WSU Everett

MESA has helped me transfer successfully in many different ways. MESA has helped me financially during times I was not able to pay for things and stressing over money, as well as helping me to succeed in classes with help on work. And most importantly I received more information through MESA then ever, which I found the most helpful as I don't have anyone in my family that has graduated college

MESA Director

Thank you for sharing and we are so excited to see what you will accomplish in the future!

UNDOCUMENTED AND NON-RESIDENT STUDENT RESOURCES

You belong here.

Undocumented and non-resident students are eligible for MESA and are encouraged to apply. We do not ask for social security numbers. **All MESA members are eligible for MESA Scholarships.**

MESA can also help you find scholarships and other resources to help support you through your academic and personal journey. The MESA website and the Conferences, Internships, and Scholarships Database catalogs other helpful links and databases.

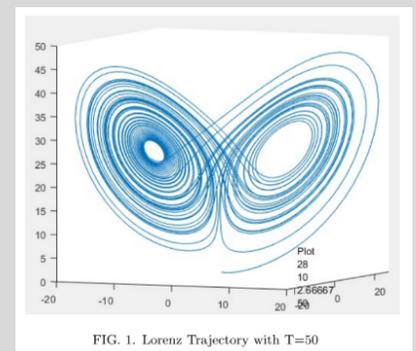
Don't forget to learn more and if eligible, complete the Resident Affidavit (House Bill 1079), which determines which students can receive the in-state tuition rate, if you have not already. You will need to complete this at each institution you attend. Additionally, MESA is an approved co-curricular program and by filling out the Non-resident Co-Curricular Program Participant Tuition/Fee Waiver Form, you can see if you qualify to have some portion of tuition waived. The MESA Director can sign this form for you and it must be submitted 3 business days before each quarter you are applying for the waiver.

MESA STUDENTS GENERATE KNOWLEDGE

Ariana

Ariana has been a MESA member for the past 2 years pursuing a degree in Mathematics. We featured some of her physics research about springs in the Fall edition of the Community Review. During Spring quarter, she further explored complex phenomena by investigating the Lorenz attractor, "a system of equations designed to model natural weather systems", in a paper entitled *The Center of Chaos*. This paper "considers the relationships between the unstable nature of the attractor and it's influence on a center of gravity."

This complex investigation resulted in a better understanding of how the Lorenz Trajectory changes across the Z-plane with different inputs and how chaotic behavior is altered by initial conditions. This type of research could inform future understandings of complex weather patterns and their impacts on health and safety.



Sample graph from "The Center of Chaos" showing the Lorenz Trajectory in XYZ planes.

Ariana will be transferring to Brown University in Rhode Island this Fall to pursue her bachelors degree in Applied Mathematics. We're excited to see what else she accomplishes in her educational journey!

INTERNSHIP FAIR

Winter 2020

The STEM Division and MESA collaborated with the Edmonds College Career Action Center (CAC) to organize and recruit for the Winter Internship Fair. Previous career fairs offered limited STEM opportunities and often focused on current employment opportunities rather than internships. In STEM and many other fields, internships are a key step in gaining experience in research, industry, and other real-world scenarios. MESA and STEM staff worked with CAC staff to recruit employers or internship hosts from a variety of disciplines. Attendees included the National Oceanic and Atmospheric Administration, Watchguard, the UW Clean Energy Institute, and others.

Overall, 150+ Edmonds College students attended the Internship Fair and of the 66 that submitted a post event survey, 42.4% said they were interested in visiting and learning about STEM employers. 94.4% indicated that the employers present were helpful and informative.

We hope to partner with the CAC in the future to increase access to internship opportunities. Many local companies, non-profits, and universities regularly host internships but often overlook the talent and enthusiasm of community college students. Bringing them to campus enhances student knowledge and increases connections between the college and surrounding community.



MESA students talking with potential internship hosts.

MESA EVENT HIGHLIGHTS: CONTINUED

Waffle Bar with MESA Kickoff: Winter 2020



MESA Students fill the Student Center at the Kickoff event while enjoying their homemade waffles.

MESA started off the Winter quarter with a cozy community kickoff. The MESA room was filled with students making waffles, and munching on sweet treats to welcome them back to campus after the Winter break.

Advancing the Future of Aerospace Conference: Winter 2020

Students attended the AIAA Advancing the Future of Aerospace Conference in November. After kicking off with a keynote about the Boeing's contributions to the Apollo Program, industry professionals from many local companies gave presentations about electrified flight, innovation in plane engines, and their passion for aerospace. Attending conferences and talking with professionals provides the opportunity for MESA students to connect with industry mentors and learn about industries they want to work in the future.



MESA students and staff during the AIAA Conference.

Women in Science and Engineering (WiSE) Conference: Winter 2020



MESA students and staff at the WiSE 2020 conference.

“WiSE impacted my intended major and future career options, was amazing to hear talks from women succeeding in STEM avenues/careers and helped me to look into the future of my schooling beyond my bachelors.”
- MESA Student

Virtual Game Nights : Spring 2020

“Game nights were everything. It was a chance for me to take a break from the crazy online classes and interact with my friends. Mesa Student Center has been my home.”

-Brenda, MESA Student, Informatics

MESA EVENT HIGHLIGHTS: CONTINUED

Boeing Panel : Spring 2020

In collaboration with the Everett Community College MESA, we hosted a virtual panel discussion with four Boeing professionals. They shared about their career journeys and tips for interviews. Students learned about the diversity of jobs within Boeing and how to land an internship. One key take-away was that standing out is more than GPAs and classes. Often all the applicants have the same technical and educational background, so your experiences, projects, passion, etc. make you unique and it is those things that can make you stand out. We thank the professionals for taking the time out of their day to connect with MESA students!

Transfer Connections Events: Spring 2020

With the eleven other MESA Community College sites, we hosted a series of eight events connecting transferring students with resources and current students at their new universities. Each event featured a panel of current students or alumni and allowed MESA students to candidly ask questions about classes, student life, and campus culture. We thank everyone that helped make this impactful event happen!



"I like how the panelists answer the questions based on their experience, it was very useful and relatable."

- Spokane Falls Community College MESA Student, Mechanical Engineering



"We are all figuring things out together! It was wonderful to hear the variation of experiences among the panelists and incoming students."

- Panelist from UW Seattle, Marine Biology

2020 FALL QUARTER EVENTS

We are very excited to start the upcoming Fall quarter off strong! We will be virtual and will continue to offer high impact resources and events for students. Here is what we have planned so far and check our social media for other updates!

- **Sept. 18th:** 2020 Virtual STEM & MESA Kickoff
- **Oct. 1st:** MESA Community College Programs Digital Career Coaching Event with Cyborgmobile
- **Oct. 15th -17th:** American Indian Science and Engineering Society (AISES) Conference
- **Oct. 19th - 24th:** Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) Conference
- **Oct. 28th - Nov. 1st:** Society of Hispanic Professional Engineers (SHPE) Conference
- **Nov. 2nd - 13th:** Society of Women Engineers (SWE) Conference

2020 Virtual STEM & MESA Website
<https://rb.gy/jhvtrp>



If you are interested in attending these events, let the MESA Director know!

2019-2020 EVENTS

Fall 2019

- STEM Start
- STEM & MESA Kickoff
- Boeing Tour
- Community Holiday Potluck, Drone Building and Racing
- AIAA Advancing the Future of Aerospace Conference
- Physics Slam
- UW Bothell Visit
- UW Transfer Student Preview Day
- Personal Statement Workshops
- Participated in Campus Sustainability Day

Winter 2020

- MESA Kickoff: Waffle Bar
- WiSE Conference
- UW Transfer Day and Biorobotics Lab Tour
- iFLY - Indoor Skydiving
- Wind Tunnel Building 1 and 2
- WSU Everett Tour
- Internship Fair with EC Career Action Center
- AAAS Conference
- Society of Professional Hispanic Engineers & Women's Transportation Seminar Panel with EC Engineering

Spring 2020

- Connect to Community: Virtual Kickoff
- Weekly Virtual Game Nights
- Weekly Meditation
- Transfer Connections Events
- Boeing Panel
- Online STEM Experiences
- Family Feud with EvCC MESA
- Women's Empowerment Awards with Campus Partners
- STEM & MESA Awards

JOIN THE #MESAFAMILY

- edcc.edu/mesa
- mesa@edcc.edu
- [@ecmesafamily](https://www.facebook.com/ecmesafamily)
- [@ecmesafamily](https://www.instagram.com/ecmesafamily)
- [showcase/ecmesa](https://www.linkedin.com/showcase/ecmesa)

THANK YOU FOR READING

Stay Tuned for Exciting Events Happening During the 2020-2021 Academic Year

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