



Education for the 4th Industrial Revolution

Colorado is at the forefront of advanced manufacturing – and today’s students are leading the way in this new American industrial revolution.

Advanced Manufacturing uses cutting-edge science and innovative technology including 3D printing, augmented reality, virtual reality, artificial intelligence, Internet of Things (IoT), machine learning and robotics. Advanced Manufacturing is in demand across sectors, from electronics and consumer products to clean energy, aerospace vehicles and medical devices.

Metropolitan State University of Denver’s Bachelor of Science in Advanced Manufacturing Sciences gives students an education that goes beyond the classroom. As one of the nation’s first undergraduate degree programs, we’ve developed an applied multidisciplinary curriculum that provides students with both technical and soft skills and robust experiential learning opportunities.

Utilizing state-of-the-art facilities and equipment in the award-winning Aerospace and Engineering Sciences Building, students gain applied skills working in internships and co-ops with industry partners, many of whom share space in the facility, to create a seamless public-private workforce pipeline.

“The students created works of art that approached engineering problems in a physically beautiful manner, unlike what is commonly seen in engineering circles... This is particularly important because (Lockheed Martin) needs different thinking to advance our spacecraft design with additive manufacturing.”

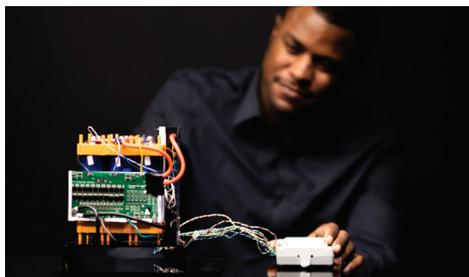
Brian Kaplun
Advanced Programs
Production Operations
Senior Manager at Lockheed Martin

“The classes you take create a broad skillset that you can apply to many different avenues... (they) helped me prepare directly for the career I am in today.”

Xavier Texidor
2021 AMSI graduate
aerospace concentration
Employed at
Lockheed Martin Space



Industry Partners



Lockheed Martin

The aerospace innovator sees MSU Denver as a vital workforce pipeline, investing \$1 million in an endowment for the Advanced Manufacturing Sciences Institute and to establish the Lockheed Martin Additive Manufacturing Laboratory anchored by the Stratasys Fortus 900mc additive printer.

A popular co-op program has placed more than 80 graduates into full-time work with the company. And a unique relationship leveraging MSU Denver's Hispanic Serving Institution status allows Lockheed Martin to contract on-demand orders with MSU Denver – a win-win-win as students also gain valuable applied learning.

CAMA - Colorado Advanced Manufacturing Association

Located on the 4th floor of the AES building, it's no coincidence the industry organization has set up shop alongside MSU Denver's AMSI. Advisory board leadership ensures both a workforce-responsive curriculum and networking opportunities for students. And with a comprehensive approach to training, including certifications targeted to those facing unemployment, the partnership meets individuals where they're at to get them the skills they need to start working right away.

Hartwig, Inc.

Students get hands-on experience working with state-of-the-art programmable machine tools equipped with advanced robotic accessories. Hartwig updates the equipment regularly at no cost to the University, ensuring that students will always work with the most cutting-edge technology. The estimated value of the manufacturing and inspection equipment, software, tools and consumables is approximately \$2 million. Hartwig's equipment is utilized by manufacturers globally spanning 65 countries in North America, Europe and Asia.

York Space Systems

Since establishing its headquarters on campus in 2017, York Space Systems has leveraged its proximity to workforce talent and AMSI resources. The firm established an innovative manufacturing facility to produce products and work in consult with faculty and students, including a classroom-based project to design new spacecraft batteries and internships leading to full-time employment. With their move to a nearby facility, the production capabilities – and collaborative opportunities – are counting down to an even greater launch.

Want to learn more?

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