



**METROPOLITAN
STATE UNIVERSITYSM
OF DENVER**

LIVES TRANSFORMED

ADVANCED MANUFACTURING ENGINEERING PROGRAM AT MSU DENVER



Metropolitan State University of Denver (MSU Denver), thanks to visionary leadership, has laid the foundation to become a preeminent urban-centric advanced manufacturing engineering university, serving the workforce development needs of the Denver region and the entire state of Colorado.

An investment of close to \$60 million by MSU Denver, the state of Colorado and private sector companies has been made to construct a state-of-the-art building, slated for completion in July 2017, demonstrating the tremendous commitment that has been made to the future of workforce development, with respect to manufacturing.

Key Milestones

NATIONALLY UNIQUE DEGREE
PROGRAM CREATED

ADVANCED MANUFACTURING
SCIENCES INSTITUTE (AMSI)
ESTABLISHED

MSU DENVER AND HARTWIG, INC.
PARTNERSHIP AGREEMENT SIGNED

PUBLIC-PRIVATE PARTNERSHIP
(P3) FLOOR CREATED IN NEW AES
BUILDING

MSU DENVER AND YORK
SPACE SYSTEMS PARTNERSHIP
ANNOUNCED

Nationally Unique Degree Program Created

A novel Advanced Manufacturing Sciences (AMS) baccalaureate degree program has been created, set to be launched fully in the Fall 2017 semester. The position level target for program graduates is "manufacturing engineer," which represents the critical, under-served position level between programmable machine tool operator and design engineer. The new B.S. degree program was designed by MSU Denver faculty in collaboration with an industry advisory board comprising respected professionals from a variety of manufacturing industry sectors.

Integrated into the instructional program will be hands-on exposure by AMS degree students to state-of-the-art subtractive and additive programmable machine tools, which will be made available to AMSI through its industry partners. The primary objective is to train students on advanced manufacturing equipment, processes and materials that are currently in use, or are projected to be in use, by manufacturers throughout Colorado and the nation.

Advanced Manufacturing Sciences Institute Established

An Advanced Manufacturing Sciences Institute has been created at MSU Denver and in October 2016, Dr. Robert Park was hired to be the first AMSI Director. The primary mission of AMSI is workforce development and its focus will be on producing graduates that are well prepared in terms of both technical and soft skills to assume *in demand* manufacturing engineering positions with manufacturing companies throughout Colorado.

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Key Milestones

MSU Denver/Hartwig, Inc. Partnership Agreement Signed

This partnership agreement, signed on February 14, 2017, represents a critical element of MSU Denver's primary focus on workforce development, since, by virtue of the partnership, participating students will receive hands-on experience working with state-of-art programmable machine tools, some of which will be equipped with advanced robotic accessories. MSU Denver faculty and students will benefit extensively from exposure to Hartwig's ecosystem of line-card and affiliate companies, as will the manufacturing base of Colorado and the region, by virtue of its anticipated interaction with the Advanced Manufacturing Sciences Institute.

Public/Private Partnership (P3) Floor Created

The creation of a unique Public/Private Partnership (P3) floor within MSU Denver's new Aerospace and Engineering Sciences building – slated for partial completion around September 2017. With a view to exposing faculty and students to workforce development opportunities that represent real-world experiences, MSU Denver is in the process of dedicating the top floor of its new building as a multi-tenant, P3 enterprise floor. Ideal tenant/partners will be involved in the manufacturing process and will have workforce development as a critical element of their business models.

MSU Denver/York Space Systems Partnership Announced

On February 28, 2017, MSU Denver and York Space Systems announced their new partnership. York Space Systems, an innovative American aerospace company founded by alumni from NASA, Lockheed Martin, Orbital ATK, and Ball Aerospace, specializing in complete space segment customer solutions and the manufacture of small and medium class spacecraft, will be establishing an innovative manufacturing facility on the P3 floor of the new Aerospace and Engineering Sciences building, as part of the Advanced Manufacturing Sciences Institute.



A rendering of York Space System's engineering and design area inside the new aerospace and engineering sciences building.

The facility will house York Space Systems' full engineering and design team, production facility, as well as a Mission Operations Center to control spacecraft on-orbit, in real-time. In addition to supporting York's premier mission, the Harbinger Mission, the facility will enable production capability for up to 150-200 satellites per year. The Harbinger Mission will be the first flight demonstration of York's S-Class platform designed to offer rapid response capability to both commercial and military customers.

York Space Systems represents an ideal tenant/partner for MSU Denver, since, as part of the partnership agreement, students will receive exposure to all aspects of the business, including satellite manufacturing, design and engineering, as well as mission operations control and data analysis.

FOR MORE INFORMATION ABOUT THE ADVANCED MANUFACTURING ENGINEERING PROGRAM, CONTACT:

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