

Advancing DRIVE AM – Aerospace Center

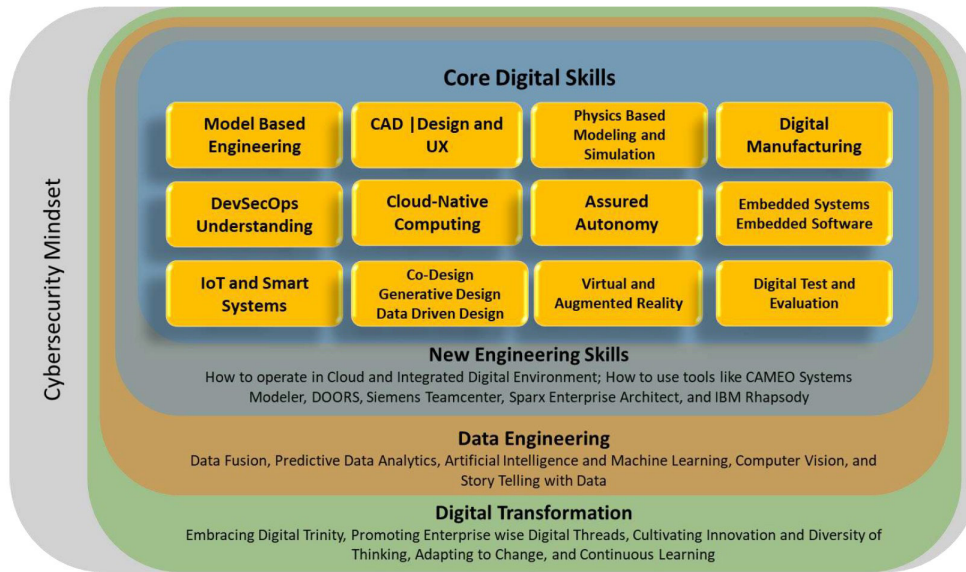


Chart of digital skills for digital engineering in the high-skill workforce

PROBLEM

Aerospace technology problems such as high-velocity systems are complex, and solutions to these issues need innovation driven by diversity. The aging Aerospace and Defense (A&D) workforce and the lack of supply of fresh domestic talents now critically endanger workforce sustainability. Nearly 27,000 positions are currently open in A&D areas, and demand for security-sensitive, position-qualified aerospace professionals is continuously rising as legacy prime contractors and new commercial space exploration companies are competing for the same talent pool.

OBJECTIVE

The purpose of the project is to meet the goals of the Department of Defense’s (DoD) digital engineering strategy which are to 1) formalize the development, integration, and use of models to inform enterprise and program decision-making; 2) provide an enduring, authoritative source of truth; 3) incorporate technological innovation to improve the engineering practice; 4) establish a supporting infrastructure and environments to perform activities, collaborate, and communicate across stakeholders; and 5) transform the culture and workforce to adopt and support digital engineering across the life cycle.



**AMERICA MAKES
TECHNOLOGY
DEVELOPMENT
ROADMAP**

This project aligns to:



DESIGN

**ASTM PROCESS
CATEGORY**
N/A

EQUIPMENT
N/A

MATERIAL
N/A

TECHNICAL APPROACH

The project effort is supported by the Aerospace and Defense Associate Degree Program of Western Tech (2-year technical college), El Paso Community School Program, Workforce Solutions Borderplex, El Paso Chamber of Commerce, and Youngstown Business Incubator to provide a comprehensive ecosystem for the design center. Western Tech is training 20 minority and veteran A&D technicians during the project period. As part of project outreach activities, El Paso Community School Program is reaching out to 200 participants in grades 9-12. The proposed Digital Engineering Aerospace and Defense Systems Design Center (DEDC) in El Paso and in Youngstown, modeled after the aerospace industry design environment, is providing an 18-month-long industry-immersive authentic design experience to undergraduate and graduate engineering students.

PROJECT START DATE

July 2021

EXPECTED END DATE

December 2023

EXPECTED DELIVERABLES

- Integrated digital environment development (tech stack)
 - Implementation of Siemens PLM toolset for use-inspired product development
- Digital skills development (immersive project-based environment) including: SleeperSat, Missile Systems Innovation, Aeronautics Systems, Lunar Lander, Lunar In-Situ Resource Utilization
- Digital test results
- Financial reports
- Monthly technical update meetings
- Final report

FUNDING

\$4,450,948 total project budget
(\$4,450,948 public funding)

PROJECT PARTICIPANTS

Project Principal:

University of Texas at El Paso (UTEP)

Project Participants:

Western Tech
El Paso Community School Program
Workforce Solutions Borderplex
El Paso Chamber of Commerce
Youngstown Business Incubator

Public Participant:

U.S. Department of Defense