

BRIDGING THE SKILLS GAP IN SMART MANUFACTURING THROUGH A NEW TECHNICIAN EDUCATION PROGRAM – GRANT YEAR 2



GOALS

- Establish the foundational curriculum model for a Smart Manufacturing Technology (SMT) pathway, integrating information technology and engineering topics.
- Create SMT associate degree and certificate programs that are industry-driven and enhanced with experiential learning opportunities.
- Develop a recruitment initiative to leverage high school relationships to promote SMT career and academic pathways, enhancing the workforce pipeline.
- Enhance educators' understanding of SMT concepts and applications.

NEW SMT COURSES DEVELOPED

- SMT1100 Cyber Security & Networking in Manufacturing
- SMT1200 Instrumentation & Control
- SMT2000 irVision Operation & Programming – 2D

COLLABORATIONS

Industry — American Honda Motor Company, Whirlpool Corporation, Smart Automation Certification Alliance (SACA), Buckeye Educational Systems

High school partners — Tri-Rivers Career, Pleasant High School, Elgin High School, Delaware Hayes High School, Pioneer Career and Technology Center

Columbus State Community College Grants Office

The Robotics/Automation and Cybersecurity Knowledge Sharing Coordination Network (TRACKS-CN)

ENGAGEMENT AND OUTREACH

- **SMT Online Hub**
A communication hub with 30 active members including high school instructors and administrators developed to share resources on Industry 4.0, discuss pathways etc.
- **SMT Summer Camp for Middle and High School Students**
Raspberry Pi and drone programming and robotics activities
- **SMT Professional Development Summit**
The Summit gives educators an opportunity to better understand smart manufacturing concepts and applications as well as a networking opportunity. It included hands-on activities in Engineering (robotics and wiring/operation of servo motors) and IT (Raspberry Pi, Python programming). The event included a keynote industry speaker.



TARGET SMT STUDENT ENROLLMENT (YEAR 2): 8	ACTUAL SMT STUDENT ENROLLMENT (YEAR 2): 12
---	--

GRANT TEAM

PRINCIPAL INVESTIGATOR

Elizabeth Azhikannickal
azhikannickale@mtc.edu

GRANT COORDINATOR

Diana Hanigan
hanigand@mtc.edu

CO-PRINCIPAL INVESTIGATOR

Mike White
whitejm@mtc.edu

PROJECT TEAM PERSONNEL

Bob Haas
haasr@mtc.edu

CO-PRINCIPAL INVESTIGATOR

Feng Hua
huaf@mtc.edu

PROGRAM EVALUATOR

Blake Urbach
blake@ppeonline.net



Grant #2000177

HAVE QUESTIONS? CONTACT:

Elizabeth Azhikannickal
Director of MTC Engineering Technologies
740-386-4155
azhikannickale@mtc.edu

Or scan the QR code for more information

