

Innovations in Advanced Machining Technician Education

BACKGROUND

A critical shortage in skilled machining technicians exists across the nation. The IAMTE project aims to increase the quality, capacity, and number of the next generation of skilled machinists in the Bear River Region through a new streamlined Machining Technology certificate. The project aligns Bridgerland Techni-cal College's Machining Technology program with local industry needs and delivers training in innovative advanced manufacturing technologies, such as 5-axis Computer Numerical Control (CNC) machines, programmable Coordinate Measuring Machines (CMM), and robotics.

FUNDER:

National Science Foundation Advanced Technological Program

TIMEFRAME:

2020-2023 3 year grant

AWARD AMOUNT:

\$499,695







INNOVATION

PROGRAM

Our current 1440-hour Machining Technology certificate will be condensed to approximately 1000 hours to facilitate increased certificate completion percentages. High school students will be seen as certificate seeking students and begin taking the full-time curriculum.

CURRICULUM

In conjunction with new CNC/CMM equipment, our current certificate curriculum will be co-designed with industry experts at local machining companies. Additionally, 5 technologically advanced continuing education courses in robotics, inspection, and 5-axis CNC will be delivered to local professionals.

PROFESSIONAL DEVELOPMENT

Three faculty will become certified in 5-axis CNC machines through a two-week training at Vincennes University. Furthermore, instructors will receive professional development training in advanced CMM inspection and robotics technologies.

KEY EARLY SUCCESSES

In the first 6 months of the grant, the machining program has:

- streamlined the machining certificate by almost 400 required instructional hours.
- acquired and installed two 5-axis CNCs and two CMMs.
- engaged in over 300 hours of advanced industry training in 5-axis CNC, CMM, and robotics.

