



Mechatronics with Instrumentation and Controls



College Name: Central Community College, Nebraska

Project Goal: To increase the number of qualified *Process Instrumentation and Control* technicians to meet current and future workforce demands in Nebraska by developing a new pathway within an existing Mechatronics program and deploying innovative recruiting, outreach, retention, and completion strategies.

Project Objectives & Significant Deliverables:

Objective 1: Establish manufacturing technology programming in Process Instrumentation and Control Technology (I&C) that prepares students for occupations in Nebraska by utilizing advanced interactive simulation equipment and distance learning strategies.

Results: Six new courses totaling 19 semester credits were added as part of the new Process Instrumentation and Control pathway in the CCC Mechatronics degree program.

Objective 2: Develop and utilize a Business and Industry Leadership Team (BILT) to actively engage business and industry as a resource in all facets of the program including curriculum development, equipment selection and funding, professional development and career awareness.

Results: A 30-member BILT team representing 24 different organizations guided the development of the new Process Instrumentation and Control pathway by identifying KSAs, recommending equipment and lab design, mentoring staff and personnel, and building new relationships between team members.

Objective 3: Increase student enrollment through the recruitment of traditional (high school) and non-traditional (adult) students, particularly from underrepresented groups such as Hispanics, veterans and women.

Results: Since the beginning of the grant, the MwIC project team and its partners engaged over 1000 educators, students and community leaders throughout Nebraska which led to a 61 percent increase in student enrollment in the Mechatronics program compared to the year before the project began. At the same time the number of students from underrepresented groups also increased and exceed the project's goals.

Objective 4: Enhance student retention and completion by embedding retention and completion strategies throughout the curriculum and college experience.

Results: Emphasis on additional student services complemented a 61% increase in enrollment in the Mechatronics program and a sizable increase in the award of Mechatronics certificates, diplomas, and AAS degrees.

Mechatronics with Instrumentation and Controls project resources are available on ATE Central.

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