Assessment: Assessment Plan

Program (CTE) - BAS- Instrumentation Emphasis

Unit Mission: • Prepare students for entry-level positions, to install, operate, or service instrumentation equipment in the mining, manufacturing, food processing, power, polymer, metallurgical, oil & gas, and other industries.
• Students learn with hands-on lab experience and lecture. Students learn mechanical, electronic, pneumatic, communication and software (PLC, DCS) aspects of instrumentation. Measurement of temperature, level, flow, and pressure with underlying theory.
• Graduates exit the program with hands-on skills and knowledge recognized by industry partners ensuring high placement rates and compensation greater than median earning in the U.S.

Outcome: Understand the role of measurement and control in industrial process.

Understand the role of measurement and control in industrial process.

Outcome Status: Active
Assessment Year: 2016-2017
Start Date: 08/29/2016

Assessment Measures

Internal Tracking - EIT 233 Introduction to Instrumentation provides a foundation for measurement and control of industrial processes. We will use EIT 233 grades to assess outcome. (Active)

Criterion: 100% passing rate with a grade of C- or better.
Notes: – We have everything we need. The text/workbook has proved adequate for previous students (Other institutions are using the same text). No additional measures needed. Outcome taken from GBC catalog.

Outcome: Build and tune a feedback control loop and apply the concepts of PID control.

Build and tune a feedback control loop and apply the concepts of PID control.

Outcome Status: Active
Assessment Year: 2016-2017
Start Date: 03/14/2016

Assessment Measures

Assignment - Project - EIT 437 Computer Analog control course material covers the outcome in depth. Measurement is made with final lab project where students demonstrate the outcome. (Active)

Criterion: Working and tuned PID feedback control loop required to pass the class. 100% passing rate with a grade of C- or better.
Notes: Instrumentation lab has multiple PID controllers, power electronics and workspace in the lab for students to accomplish the objective. No further materials are needed. Detailed rubric for PID lab projects have been developed in previously taught courses. Outcome taken from GBC catalog.

Program (CTE) - BAS- Instrumentation Emphasis

Outcome: Apply ISA standards to interpret symbols and documentation.

Apply ISA standards to interpret symbols and documentation.

Outcome Status: Active
Assessment Year: 2016-2017
Start Date: 10/17/2016

Assessment Measures

Assignment - Project - EIT 333 Process (Piping) and Instrument Diagrams (P&IDs). Using ISA symbols and Autocad, students develop “as-built” drawings as a final lab project. This report is graded and evaluated. (Active)
Criterion: As-built drawing correctly describes the process loop with ISA symbols. 100% passing rate with a grade of C- or better. **Notes:** Instrumentation lab has working process control loops for students to base drawings on. Computer lab is equipped with Autocad. Outcome taken from GBC catalog.