

Course Outcomes Guide

Course/Program Title: ELE 235 Advanced Concepts & App. of Controls Date: 8/22/2012

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Expected Learning Outcomes

- Knowledge of Instrumentation and Process Control
 - Identify needed parameters and set to desired values within a control system.
 - Select program and graphics required to implement a SCADA system.
 - Commission an Instrumentation System.
 - Evaluate collected data from an instrumentation system.
 - Identify security risk and determine standard precautionary measures.
 - Build a computer networking and SCADA security system
- Knowledge of Instrumentation troubleshooting, repair and maintenance
- Demonstrate competency of instrumentation and controls components and software in an applied environment
 - Demonstrate skills in research and data collection
 - Demonstrate skills in organization of data.
 - Demonstrate presentation skills.
 - Demonstrate competency in digital instrumentation and process control.
- Exhibit professional/occupational behavior and work habits

Assessment (How do or will students demonstrate achievement of each outcome?)

- Exams
- Exercises and Assignments
- Project similar in scope to real world experience/installation

Validation (What methods have you used or will you use to validate your assessment?)

The assessments will be validated by review from the following sources:

1. Facility Peer validation
2. Industry validation through the Advisory Committee.

Results (What do your assessment data show? If you have not yet assessed student achievement of your learning outcomes, when is assessment planned?)

The assessment will be planned at the end of the first semester this course will be offered: Spring 2013.

Follow-up (How have you used or how will you use the data to improve student learning?)

Assessment data will be gathered to be sure students are retaining key knowledge as required by future jobs in the industry. Additional course material or time will be added if scores do not show retention.

Budget Justification (What resources are necessary to improve student learning?)

None at this time.