

Louisiana Delta Community College

Academic Affairs Master Syllabus

Course Name: PROCESS INSTRUMENTATION II

Course Number: PTEC 132

Lecture hours: 3

Lab Hours: 0

Credit Hours: 3

Textbook, Author, and Publisher: To be provided by College Campus

Instructor Information: To be provided by College Campus

Class Location: To be provided by College Campus

Course Description:

This course, the second of a two semester sequence, involves the continuation of the study of the instruments and instrument systems used in the chemical processing industry including terminology, primary variables, symbology, control loops, and basic troubleshooting.

Prerequisites: Successful completion of PTEC 101 and PTEC 131 with a grade of C or higher.

Co-requisites: PTEC 161

Learning Outcomes:

On completion of this course, the student will be able to:

1. Identify and explain the fundamentals of process control.
2. Define and explain the physical principles of the process parameters of pressure, temperature, level, and flow.
3. Identify and explain the function of pneumatic and electronic transmitters and transducers, physical displacement transducers, and the scaled-value outputs of common transducers.
4. Explain the function, operation, and maintenance of chemistry analyzers.
5. Define and explain controller response characteristics and the function of pneumatic, electronic, and digital controllers.
6. Identify and explain the function, operation, and troubleshooting of final control devices.
7. Integrate and incorporate computer generated simulations, Simtronics, into lecture and lab.
8. Describe and explain the function, purpose, and application of emergency shutdown devices, redundant safeguards, fail-safe systems, interlocks, trips, and permissives.
9. Explain the function, operation, and troubleshooting of programmable logic controllers.

Assessment Measures: To be provided by College Campus

Library Resource Center:

The Delta Library and Learning Resource Center is committed to providing quality information and learning resources and services, including technology, in supporting the overall mission of Louisiana Delta Community College and its commitment to lifelong learning.

Special Accommodations:

Louisiana Delta Community College complies with Section 504 of the Rehabilitation Act, as well as the Americans with Disabilities Act. Students with disabilities who attend the Monroe campus may make a request by contacting the Director of Counseling and Disability Services (See College Directory for contact information.) at the beginning of each semester. Reasonable accommodations will be attempted for students with documented disabilities. If an impairment is identified later in the semester, a non-retroactive accommodation plan will be developed. Students at satellite campuses should contact the Coordinator of Student Affairs at their particular campus.

Title IX:

Louisiana Delta Community College is committed to protecting the rights of students, which includes compliance with Title IX requirements. As such, the institution and members of our community will not tolerate the offenses of dating violence, domestic violence, sexual assault, and stalking. Students with Title IX concerns should contact the College's Title IX Coordinator (See College Directory for contact information.) Students are required to complete Sexual Assault Awareness and Prevention Online Training. Access to this online course will be sent out through the Delta email account.

Student Code of Conduct:

Louisiana Delta Community College encourages an environment of academic integrity and mutual respect. Students should read and follow both academic and behavioral expectations identified in the Code of Student Conduct that can be found online at www.ladelta.edu. Students are expected to act with integrity, respect the rights of others, and conduct themselves in a professional manner. The Honor Code prohibits academic misconduct such as cheating, engaging in unauthorized collaboration, and plagiarism. Violations of the Code of Student Conduct may result in disciplinary action as provided in the Code. Incidents are reported through the online Student Conduct system.