

Course Abstract

If you need accommodations due to a disability, contact Disability Services in Edison Hall Room 100, 732.906.2546.

To foster a productive learning environment, the College requires that all students adhere to the Code of Student Conduct which is published in the college catalog and website.

Course ID and Name: CPT 205 Process Technology Instrumentation

Department: Natural Sciences
Chairperson: Dr. Donna Howell
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Prerequisites: CHM 107, CPT 100 **Co-requisites:** None

Course Description: This course will introduce the student to all aspects of instrumentation used in the process industry. Students will be introduced to a variety of common terms, relationships between process variables, and pertinent concepts and definitions. Students will learn about process instruments that control pressure, temperature, flow and level. The concept of control loops and how each component of a control loop acts individually and together within a control loop to sense measure, compare and control or convert signals between the various components will be examined.

General Education Status:

Credits: 3

Learning Outcomes:

1. Be able to explain the relationship between common process variables
2. Describe the purpose and operation of pressure/sensing, temperature/sensing, level and flow sensing measurement instruments used in the process industry
3. Identify the most common types of analytical devices used in the process industry
4. Explain the function of a control loop
5. Understand the process of switching from auto control to manual control on a local controller

Course Content Areas:

1. Introduction to Instrumentation
2. Process variables, elements and pressure
3. Process Instruments:
Temperature
Level
Flow
Analytical
4. Control loops, valves and regulators
5. Instrumentation trouble shooting