

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 206 Process Technology Equipment

Department: Natural Sciences
Chairperson: Dr. Donna Howell
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Prerequisites: CHM 107, CPT 100

Co-requisites: None

Course Description: The purpose of this hands-on course is to introduce students to practical fluid, heat and mass transfer theory as evident in typical industrial processes. The course will introduce the student to all aspects of equipment used in the process industry. Students will learn about the operation of processing equipment such as: reactors, dryers, filters, motors, pumps, valves, gauges, transmitters, utilities, piping, tubing and computer. A simple pilot plant will be designed, built, and tested.

General Education Status:

Credits: 4

Learning Outcomes:

1. Describe equipment operations common to the refinery, petrochemical, and pharmaceutical industries
2. Explain pressure and temperature limits of hoses and fittings
3. Explain the role of compressors, turbines, motors, and engines in the process industry
4. Explain the role of transmission and lubrication in the process industry
5. Explain the purpose of heat exchanges in the process industry

Course Content Areas:

1. Introduction to Process Equipment
2. Equipment and tools
3. Piping, tubing, hoses and fillings
4. Valves
5. Pumps – I and II
6. Compressors I and II
7. Turbines
8. Motors and Engines
9. Power Transmission and lubrication
10. Heat exchangers I and II