

PROCESS TECHNOLOGY (340PRTE)

Process Technology (340PRTE) 116

Process Instrumentation I

This course provides an introduction to the instrumentation used in process industries. Student will develop knowledge of instruments and instrument systems used to monitor and control variables in production processes, especially in the petrochemical industry. Terminology, process variables, symbology, control loops and basic troubleshooting will be covered. Writing assignments, as appropriate to the discipline, are part of the course.

Grade of C or better in 340PRTE 124, and Eligibility for MATH 98, or Consent of Department Chairperson.

2 Laboratory hours. 3 Lecture hours. 4 Credit Hours.

Offered At: DA

Process Technology (340PRTE) 117

Process Instrumentation II

This course is to provide an overview into the field of instrumentation as it relates to operations within the process industries. In this course, students draw upon their knowledge of equipment, systems and instrumentation, to understand the operation of the entire unit. Students study concepts related to commissioning, normal startup, normal operations, normal shutdown, turnarounds and abnormal situations as well as the Process technician's role in performing the task associated with these concepts within an operating unit. Writing assignments, as appropriate to the discipline, are part of the course.

Grade of C or better in 340PRTE 116

2 Laboratory hours. 3 Lecture hours. 4 Credit Hours.

Offered At: DA

Process Technology (340PRTE) 118

Process Technology Equipment

This course provides an overview and introduction into some of the equipment and vessels, and their operations, within the Process Industry. Students will be introduced to process industry equipment fundamentals, such as purpose, terminology, components, operation, and Process Technician's role for operating and troubleshooting the equipment. Writing assignments, as appropriate to the discipline, are part of the course.

Grade of C or better in 340PRTE 116 and 124.

4 Laboratory hours. 4 Lecture hours. 6 Credit Hours.

Offered At: DA

Process Technology (340PRTE) 124

Introduction to Process Technology

This course provides an introduction to the field of process industry operations and an overview of the roles and responsibilities of process technicians, the environment in which they work, and the equipment and systems that they operate. Students will be introduced to several process industry equipment concepts including purpose, components, and operation. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for ENGLISH 96 or Consent of Department Chairperson.

4 Lecture hours. 4 Credit Hours.

Offered At: DA

Process Technology (340PRTE) 125

Safety, Health and Environment

Students are introduced to various types of plant hazards, safety and environmental systems and equipment, and to the regulations that underscore process industries. This course will also explore the safety and health hazards of specific hazardous materials, safety data sheets (SDS), labeling and placarding systems, and emergency operations. Regulations and standards from Occupational Safety and Health Administration (OSHA), National Fire Protection Association (NFPA) and Department of Transportation (DOT) will be utilized as primary sources of current hazardous material management. Writing assignments, as appropriate to the discipline, are part of the course.

Grade of C or better in 340PRTE 124.

6 Lecture hours. 6 Credit Hours.

Offered At: DA

Process Technology (340PRTE) 202

Quality Control

Introduces many process industry-related quality concepts including operating consistency, continuous improvement, plant economics, team skills, and statistical process control (SPC). Writing assignments, as appropriate to the discipline, are part of the course.

Grade of C or better in 340PRTE 118.

3 Lecture hours. 3 Credit Hours.

Offered At: DA

Process Technology (340PRTE) 203

Unit Systems

Introduces the concept of system and plant economics; studies the interrelation of process systems by arranging process equipment into basic systems; explain how factors affecting process systems are controlled under normal conditions; and recognizes abnormal process conditions. Writing assignments, as appropriate to the discipline, are part of the course.

Grade of C or better in 340PRTE 125.

2 Laboratory hours. 3 Lecture hours. 4 Credit Hours.

Offered At: DA

Process Technology (340PRTE) 204

Operations

Students are introduced to the operation of process manufacturing including material handling of bulk liquids and solids, and the physics of process technology. The special problems of unit shutdown and startup of chemical plants and refineries is explained as both a business and an environmental problem. Writing assignments, as appropriate to the discipline, are part of the course.

Grade of C or better in 340PRTE 124 and 203.

2 Laboratory hours. 3 Lecture hours. 4 Credit Hours.

Offered At: DA

Process Technology (340PRTE) 205

Process Troubleshooting

This course integrates the application of process control with the use of computer-simulated exercises. The use of process control simulations challenges the student to exercise logical troubleshooting techniques to solve operational problems. The course utilizes "what if drills" to enhance troubleshooting skills. Writing assignments, as appropriate to the discipline, are part of the course.

Grade of C or better in 340PRTE 118 and 203, and Grade of C or better -OR- Concurrent enrollment in CIS 120.

2 Laboratory hours. 3 Lecture hours. 4 Credit Hours.

Offered At: DA

Process Technology (340PRTE) 206

Process Technology Internship

Participating students work in their area of study under the supervision of college personnel and the participating employer. Internship objectives are developed by the student and his/her faculty adviser, with approval of the participating employer, to provide an appropriate and meaningful work-based learning experience. Writing assignments, as appropriate to the discipline, are part of the course.

15 Laboratory hours. 3 Credit Hours.

Offered At: DA