

# PROCESS TECHNOLOGY



**Pathway: Applied Sciences**

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| Award Title         | Award Type | GE Units | Required Course Units | Major Elective Units | Major Units |
|---------------------|------------|----------|-----------------------|----------------------|-------------|
| Process Technology* | A.S.       | 21*      | 45                    | -                    | 45          |
| Process Technology  | C          |          | 45                    | -                    | 45          |

At least 60 degree applicable units are required to earn an Associate degree.

\*This Associate Degree may be eligible for a reduction of General Education requirements from 21 to 18 units; please consult with a counselor for more details.

## PROGRAM OVERVIEW

The Chemical Process Industries (CPI) are a major part of U.S. business and represent a diverse industries ranging from pharmaceuticals to large-scale processing of gasoline and waste water treatment and food and beverage. Working in the CPI represents a particular challenge with regard to handling materials, which range from small quantities of specialized products to large quantities of potentially hazardous materials.

Process Technicians (PTs) team with engineers and other technicians with specialties such as instrumentation, electronics, or maintenance to adjust and optimize conditions for the production of large quantities of products. The quality of the production is dependent on the skill and knowledge of the Process Technician in carrying out the operations of the plant. PTs must be concerned with issues such as personal and co-worker safety, impact of materials on the environment, and process skills that deal with all aspects of controlling processes and maintaining equipment.

CPI is the fourth largest manufacturing industry in the United States. It encompasses plants manufacturing an almost endless range of products, such as chemicals, (both organic and inorganic), food and beverages, cleaning preparations, plastics, agricultural chemicals, paints, pharmaceuticals, cosmetics, power generation, pulp and paper, petroleum refining and wastewater treatment, to name just a few.

The LATTC Process Technology program is a member of the California Chemical and Process Technology Alliance (CCPTA) and the Pacific Technology Career Alliance, an education/industry consortia of major chemical industries both public and private. The CCPTA was founded for the purpose of ensuring that Process Technology instructors and students are on the receiving end of current industry analytical methods, techniques, equipment and standards. The Alliance is also committed to providing a well skilled employee pool for chemical industry employment opportunities.

The Alliance is also committed to providing a well skilled employee pool for chemical industry employment opportunities. At the conclusion of this program, students will have the skills necessary for:

- Working in the refinery, biomanufacturing, petrochemical and other process industry, including treatment plants
- Monitoring safety/health and environmental regulations
- Sampling and handling chemical materials
- Measuring physical properties
- Operating and maintaining process instruments and equipment
- Understanding process operations using P&IDs and associated documents
- Troubleshooting process operations.

You can register in these classes by logging on to the Student Information System at <http://college.lattc.edu/student/new-students/register-now/>

For additional information consult a LATTC college counselor.

## PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the Degree/Certificate program, students are able to:

1. Explain industrial operations and processes.
2. Recognize and perform industrial regulatory processes.

## PROCESS TECHNOLOGY

### Associate in Science Degree

Major Units: 45

Requirements for the Associate in Science degree in Process Technology may be met by completing 45 units of Required Courses with a grade of "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

## REQUIRED COURSES

| SEMESTER I     |   | UNITS |
|----------------|---|-------|
| PRPLTEK 100    | Introduction to Industrial Process  | 3     |
| PRPLTEK 103    | Process Plant Equipment   | 3     |
| PHYSICS 011    | Introductory Physics  | 4     |
| CHEM T 111     | Applied Chemistry I   | 5     |
| SEMESTER II    |   | UNITS |
| PRPLTEK 102    | Process Measurement and Control Fundamentals  | 3     |
| PRPLTEK 200    | Process Plant Systems   | 3     |
| PRPLTEK 204    | PTech Instrumentation - Computer Applications   | 2     |
| SEMESTER III   |   | UNITS |
| PRPLTEK 206    | PTech-Advanced Instrumentation II   | 3     |
| PRPLTEK 210    | Applied Instrumentation Analysis I<br><i>-or- CHEM T 132 Quantitative and Instrumental Analysis I (5)</i> | 4     |
| PRPLTEK 104    | Introduction to Process Plant Safety  | 3     |
| SEMESTER IV    |   | UNITS |
| PRPLTEK 202    | Introduction to Process Plant Troubleshooting   | 3     |
| PHYSICS 029A/B | Basic Physics for Technicians   | 4     |
| MATH 125       | Intermediate Algebra<br><i>-or- higher</i>  | 5     |

## PROCESS TECHNOLOGY

### Certificate of Achievement

Major Units: 45

A Certificate of Achievement in Process Technology may be earned by completing 45 units of Required Courses listed under for the Associates degree in Process Technology with a "C" or better in each course.

## USEFUL LATTC LINKS:

**College Catalog:** <http://college.lattc.edu/catalog/>

**Financial Aid Office:** <http://college.lattc.edu/financialaid/>

**Counseling Department:** <http://college.lattc.edu/counseling/>

**General Education Information:** <http://college.lattc.edu/catalog/>

**Applied Sciences Pathway:** <http://college.lattc.edu/asp/>