

**ATPT 244 Process Technology III-Operations**

**Credit Hours: 3**

**Scheduled hours per week**

**Lecture: 10**

**Lab: 2**

**Other: #**

**Catalog Course Description:**

Equipment roles and control methods are studied for each process system. Emphasis is on the safety of each of these systems and the role played by operator in maintaining the system safely.

**Pre-requisites: ATPT 130, ATPT 131, ATPT 140**

**Co-requisites: None**

**Course Learning Outcomes:**

**Understand**

- *Develop an understanding of procedures required for normal operations, startups, shutdowns, abnormal operations, emergency procedures, commissioning, procedure writing, and communications.*
- *Develop an understanding of the roles, and responsibilities of field technicians, and control room technicians in a process facility.*
- *Develop an understanding of housekeeping, compliance with SH&E practices and policies, verbal and written communication, and shift change.*
- *Develop an understanding of equipment, maintenance procedures including LOTO, economics of operations, various permits for maintenance work.*

**Topics to be studied:**

Procedure writing  
Communication  
On the Job Training  
Unit commissioning  
Unit Shutdown  
Maintenance familiarization

Using process drawings  
Abnormal and emergency operations  
Lock-out/tag-out  
Unit Start up  
Hazard assessment and management  
Using operations manuals

<b>Relationship of Course to Program Learning Outcomes:</b>	
Exhibit knowledge of OSHA General Industry requirements.	
Articulate Total Quality Management concepts including customer service, variance, process capability, continuous improvement, corrective/preventive action, SPC basics, data collection, and control charts.	
Internalize the process instrumentation that a process technician/operator utilizes in performing job functions.	X
Use the various types of equipment in the process environment in a productive manner, and the interaction of the process operator/technician with it.	
Knowledge of equipment roles and control methods for each process system.	X
Demonstrate safety and the role played by operator in maintaining the system safely.	X
Understand and follow Block flow diagrams, P & ID drawings, Process Flow diagrams, 3D drawings, and Plot plans.	
Use critical thinking skills, be able to see and troubleshoot problems in the process through trending and analysis of process parameters. Use critical thinking skills, be able to see and troubleshoot problems in the process through trending and analysis of process parameters.	X
<b>10/20/2017</b>	

<b>Relationship of Course to General Education Learning Outcomes:</b>	
<b>Composition and Rhetoric</b> Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	X
<b>Science &amp; Technology</b> Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	X
<b>Mathematics &amp; Quantitative Skills</b> Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	X
<b>Society, Diversity, &amp; Connections</b> Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	X
<b>Human Inquiry &amp; the Past</b> Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	X
<b>The Arts &amp; Creativity</b> Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	
<b>5/3/20016</b>	

**Special requirements of the course:**

None

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**Date:** 10/20/2017