

Introduction to Process Technology (PTAC 1302) Online



Credit: 3 semester credit hours (3 hours lecture)

Prerequisite/Co-requisite: None Complete the Online Orientation and answer yes to 7+ questions on the Online Learner Self-Assessment:
<http://www.lit.edu/depts/DistanceEd/OnlineOrientation/OOStep2.aspx>

Course Description

An introduction overview of the process industries. *This course is time-bound, structured, and completed totally online.*

Required Textbook and Materials

1. *Introduction to Process Technology*, Pearson, Second Edition
 - a. ISBN number is 0-13-480824-X

Course Objectives

Upon completion of this course, the student will be able to:

1. Describe the roles, responsibilities, safety, environmental, and quality concepts associated with the work environment of a process technician.
2. Identify basic processes, equipment and systems.
3. Define and apply terms and symbols needed in the processing industry.

Course Outline

- | | |
|---|---|
| A. Introduction | D. Equipment Used in Process Technology |
| 1. An Overview | 1. Piping and Valves |
| 2. Oil and Gas Mining | 2. Vessels |
| 3. Chemical and Pharmaceutical Ind. | 3. Pumps |
| 4. Power Generation Ind. | 4. Compressors |
| 5. Food and Beverage Ind. | 5. Turbines |
| 6. Water and Wastewater Treatment | 6. Electricity and Motors |
| 7. Pulp and Paper Industry | 7. Heat Exchangers |
| B. Skills for Process Technicians | 8. Cooling Towers |
| 1. Working as Teams | 9. Furnaces |
| 2. Safety, Health, Environment & Security | 10. Boilers |
| 3. Quality. | 11. Distillation |
| C. Basic Knowledge for Process Techs. | 12. Process Service Utilities |
| 1. Basic Physics | 13. Process Auxiliaries |
| 2. Basic Chemistry | 14. Instrumentation |
| 3. Process Drawings | |

Grade Scale

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

Course Evaluation

Final grades will be calculated according to the following criteria:

Assignments	20%
Discussions	10%
Tests	40%
Final	30%

Course Requirements

1. Post weekly, online responses to student-to-student and student-to-instructor discussions.
2. Complete the online test, quizzes and assignments by the due dates shown on the course calendar
3. Log onto Blackboard and access the course a minimum of three times per week.

Course Policies

1. You must log onto Blackboard and access this course a minimum of three times per week.
2. No cheating of any kind will be tolerated. Students caught cheating or helping someone to cheat can and will be removed from the class for the semester. Cheating can result in expulsion from LIT.
3. If you wish to drop a course, the student is responsible for initiating and dropping the course. If you stop logging-in to the course and do not complete the course drop process, then you will receive an “F” grade for the course
4. Internet Usage – Students are expected to use proper net etiquette while participating in course emails, assignment submissions, and online discussions.
5. A student who wishes to drop a course is responsible for initiating and completing the drop process. A student who stops coming to class, and fails to drop the course, will earn an “F” in the course.

Student Code of Conduct Statement

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the LIT Catalog and Student Handbook. The LIT Catalog and Student Handbook may be accessed at www.lit.edu or obtained in print upon request at the Student Services Office.

Technical Requirements

The latest technical requirements, including hardware, compatible browsers, operating systems, software, Java, etc. can be found online at:

<http://kb.blackboard.com/pages/viewpage.action?pageId=25368512>

A functional broadband internet connection, such as DSL, cable, 3G, 4G, WiMAX, Wi-Fi, satellite, or other broadband access is necessary to maximize the use of the online technology and resources.

Disabilities Statement

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services, Cecil Beeson Building.

If you believe you have a disability requiring an accommodations, please reference the following website <http://www.lit.edu/depts/stuserv/special/default.aspx>

Course Schedule (Subject to Change)

Week	Topic	Reference
1	Course Orientation – Introductions, Syllabus, Learning Environment Orientation. Chapter 1-7 – Process Technology	Syllabus Netiquette Link Introduction Quiz
1	Working as Teams	Chapter 8 Assignment 1 Discussion 1
1/2	Safety, Health, Environment and Security Quality **TEST 1 – Chapter 1-10	Chapter 9 & 10
2	Basic Physics Basic Chemistry	Chapter 11 & 12 Assignment 2 Discussion 2
2	Process Drawings **TEST 2 – Chapters 11-13	Chapters 13
3	Piping & Valves, Vessels, Pumps	Chapter 14, 15 &16
4	Compressors, Turbines, Electricity and Motors	Chapter 17,18,19 Assignment 3
3	**TEST 3 – Chapters 14-19	
5	Heat Exchangers, Cooling Towers	Chapter 20 & 21

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Course Syllabus

		Discussion 3
5	Furnaces **TEST 4 - Chapters 20-22	Chapter 22
5	Boilers	Chapter 23
6	Distillation **TEST 5 - Chapters 23-24	Chapter 24 Assignment 4
6	Process Service Utilities	Chapter 25
6	Process Auxiliaries	Chapter 26 Discussion 4
6	Instrumentation **TEST 6 – 25-27	Chapter 27
