Process Technology I – Equipment(PTAC 1410 3B1)
Fall 2025

CREDIT
4 Semester Credit Hours (3hours lecture, 3
hours lab)

MODE OF INSTRUCTION
Face to Face

PREREQUISITE/CO-REQUISITE:
None

COURSE DESCRIPTION
Instruction to the use of common processing equipment.

COURSE OBJECTIVES
Upon completion of this course, the student will be able to
1. Define and use terminology.

2. Identify and describe components, basic functions and scientific principles associated with process equipment.

INSTRUCTOR CONTACT INFORMATION

Instructor: Joseph Morrell

Email: jwmorrell@lit.edu

Office Phone: 409-245-8758

Office Location: ExxonMobil PATC building room 202

Office Hours: Before and after class period

REQUIRED TEXTBOOK AND MATERIALS
1. *Process Technology Equipment,* CAPT
   ISBN number: 978-0137004126
   Simtronics Student Workbook (Optional per Instructor, Lamar University Bookstore)
2. Equipment – Lab PPE is closed toe shoes (no sandals, crocs, flip flops), shirts with sleeves (no muscle shirts), long pants.

Approved: Initials/date

ATTENDANCE POLICY

You are required to log on weekly to Blackboard and review the week's course material. Additionally, you are required to check your LIT emails weekly.

According to campus policy, students must be in attendance for 80% of class days. The following is the policy for absences in all 16-week process technology classes and labs.

Miss 3 classes or less receive calculated grade

Miss 4 classes 10 points dropped from calculated grade

Miss 5 classes 20 points dropped from calculated grade

Miss 6 classes 30 points dropped from calculated grade

Miss 7 or more classes student receives an 'F'

A student is absent if they are not physically in the classroom. An excused absence simply means that the student can make up any missed work.

Three student tardies will be considered one absence. A student is considered to be tardy once the instructor has completed taking roll.

Class attendance and participation is an individual student responsibility. Students taking traditional face-to-face courses are expected to attend class and complete all assignments by stated due dates. Excessive absences and tardies will be dealt with on a case-by-case basis.

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the Academic Calendar available on the LIT website otherwise the grade you receive in the course will impact your GPA.

STUDENT EXPECTED TIME REQUIREMENT

For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16-week session OR approximately twelve to eighteen hours in an 8-week session. Online/Hybrid students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

COURSE CALENDAR

MODULE	TOPIC	READINGS (Due on this Date)	ASSIGNMENTS (Due on this Date)
8/25	Chapter 1 Introduction to process tech, syllabus, policies.		
8/27	Chapter 2 Process Drawings		
9/1	Chapter 3 Tools		
9/3	Chapter 4 Piping Gaskets, Tubing, Hoses & Fittings		Homework #1 Due
9/8	**Test 1**		Test #1 in class
9/10	Chapter 5 Valves		
9/15	Chapter 6 Pumps		
9/17	Chapter 7 Compressors		
9/22	Chapter 8 Turbines		
9/24	Chapter 9 Motors & engines		
9/29	**Test 2**		Test #2 in class Homework #2 Due
10/1	Chapter 10 Power Transmission & Lubrication		
10/6	Chapter 11 Heat Exchangers		
10/8	Chapter 12 Cooling Towers		
10/13	Chapter 13 Furnaces		
10/15	**Test 3**		Test #3 in class
10/20	Chapter 14 Boilers		
10/22	Chapter 15 Vessels		
10/27	Chapter 16 Reactors		
10/29	**Test 4**		Test #4 in class

			Homework #3 Due
11/3	Chapter 17 Filters & Dryers		
11/5	Chapter 18 Solids Handling Equipment		
11/10	Chapter 19 Environmental Control Equipment		
11/12	Chapter 20 Auxiliary Equipment		
11/17	**Test 5**		Test #5 in class
11/19	Class reviews, lab testing		Lab signoffs
11/24	Class reviews, lab testing		Lab signoffs
11/26	Class reviews, lab testing		Lab signoffs
12/1	Class reviews, lab testing		Lab signoffs
12/3	Test Final Exam		Final Exam

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

1. Unit tests   30%

2. Final exam   30%

3. Homework/quizzes   20%

4. Participation/lab   20%

GRADE SCALE

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

TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at https://lit.edu/online-learning/online-learning-minimum-computer-requirements. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

DISABILITIES STATEMENT
The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at Special Populations - Lamar Institute of Technology (lit.edu).

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. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

AI STATEMENT

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI / ChatGPT in their courses.

STARFISH
LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

ADDITIONAL COURSE POLICIES/INFORMATION
Schedule subject to change due to unforeseen events.