

Process Technology II - Systems PTAC 2420 1A1

CREDIT

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

MODE OF INSTRUCTION

Hybrid/Face to Face

PREREQUISITE

PTAC 1302 and PTAC 1410

COURSE DESCRIPTION

A study of various process systems including related scientific principles

COURSE OBJECTIVES

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

1. Describe the purpose and function of common process systems;
2. Explain and demonstrate the operation of each process system.

INSTRUCTOR CONTACT INFORMATION

Instructor: James Robinson

Email: jrobinson@lit.edu

Office Phone: 409-247-5376

Office Location: ExxonMobil PATC Building room 205

Office Hours: Tuesday and Thursday [12 – 1:30 pm]

REQUIRED TEXTBOOK AND MATERIALS

1. *Process Technology Systems* by Michael Speegle
 - a. ISBN number: 1418039993
2. *Simtronics Students Workbook* (Barnes and Noble Bookstore only)

ATTENDANCE POLICY

1. Missing more than 20% of classes will result in an automatic “F” for the course.
2. Absences are counted for unexcused, excused and coming to class late.



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3. Missing more than 20% of a class period will count as an absence.
4. Being tardy 2 times equals 1 absence.

Approved: **Initials/date**

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an “F” in the course.

COURSE EVALUATION Final grades will be calculated according to the following criteria:

- | | |
|----------------------|-----|
| 1. Unit tests | 40% |
| 2. Final exam | 40% |
| 3. Homework/quizzes | 5% |
| 4. Participation/lab | 15% |

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-minimumcomputer-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 \(lit.edu\)](https://www.lit.edu/special-populations).

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.

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 per Instructor or LIT campus issues.

Summer II 2026 PTAC 2420 Class SCHEDULE		
Date		
7/8/2026	Class syllabus & expectations; Chapter 1: The System Concept	
7/9/2026	Chapter 2: Overview of Industrial Water Treatment	
7/13/2026	Chapter 3: Fire Water, Wastewater & Storm Water/ Chapter 4: Potable Water, Process Water & Demin Water	
7/14/2026	Chapter 5: Cooling Water Systems	Test #1: Chapter 1-5
7/15/2026	Chapter 6: Plant Air, Instrument Air & Nitrogen Systems/ Chapter 7: Natural Gas & Fuel Gas Systems	
7/16/2026	Chapter 8: Steam Generation & Boiler Feedwater Systems	
7/20/2026	Chapter 9: Steam Distribution & Condensate Systems	
7/21/2026	Chapter 10: Electrical Power Generation & Distribution Systems	Test #2: Chapters 6-9
7/22/2026	Chapter 11: Relief & Flare Systems	
7/23/2026	Chapter 12: Refrigeration Systems	
7/27/2026	Chapter 13: Distillation Systems	
7/28/2026	Chapter 14: Combustion Systems	Test #3: Chapters 10-13
7/29/2026	Chapter 15: Extraction Systems	

7/30/226	Chapter 16: Adsorption Systems	
8/3/2026	Chapter 17: Absorption & Stripping Systems	
8/4/2026	Chapter 18: Reactor Systems	Test #4: Chapters 14-17
8/5/2026	Chapter 21: Filtration Systems	
8/6/2026	Chapter 22: Drying Systems	
8/10/2026	Chapter 23: Material Storage & Blending Systems	
8/11/2026	Chapter 24: Environmental Compliance Systems	Test #5: Chapters 18, 21-24
8/12/2026	Review	
8/13/2026	Final Exam: comprehensive	