Process Technology II - Systems PTAC 2420 6A1

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

MODE OF INSTRUCTION

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 [9:30 – 11:30 am]

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.
- 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 CALENDAR

DATE	ΤΟΡΙϹ	READINGS	ASSIGNMENTS
		(Due on this Date)	(Due on this Date)
Week 1	Course introduction and	Handouts, Ch 1.	
	policies.		
	The Systems Concept.		
2	Overview of Industrial	Ch 2.	
	Water Treatment.		
3	Fire Water, Wastewater	Ch 3 and 4.	
	& Storm Water Systems		
	Potable Water, Process		
	Water & Demineralized		
	Water Systems.		
4	Cooling Water Systems	Ch 5	
5	Plant Air, Instrument Air	Ch 6 and 7.	Test 1 Ch 2 - 5.
	and Nitrogen Systems		
	Natural Gas and Fuel Gas		
	Systems.		
6	Steam Generation and	Ch 8,9,10.	
	Boiler Feedwater System		
	Steam Distribution and		
	Condensate System		
	Electrical Power		
	Generation and		
	Distribution Systems.		
7	Relief and Flare System	Ch 11 and 12.	Test 2 Ch 6 - 10.
	Refrigeration Systems.		
8	Distillation Systems.	Ch 13.	
9	Combustion Systems,	Ch 14 and 15.	
	Extraction Systems.		
10	Adsorption Systems	Ch 16 and 17.	
	Absorption and Stripping		
	Systems.		
11	Reactor Systems.	Ch 18.	Test 3 Ch 11 – 18.
12	Centrifuge Systems,	Ch 19 and 20.	

	Crystallization Systems.		
13	Filtration Systems,	Ch 21 and 22.	
	Drying Systems.		
14	Material Storage and Blending Systems.	Ch 23.	Test 4 Ch 19 – 23.
15	Review for final exam Finish Simtronics, Student Workbooks.		
16			COMPREHENSIVE FINAL
			EXAM

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-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 <u>specialpopulations@lit.edu</u>. You may also visit the online resource at <u>Special Populations -</u> <u>Lamar Institute of Technology (lit.edu</u>).

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 <u>www.lit.edu</u>. 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.