



PTAC 2438.221C3
Process Technology III - Operations
Spring 2025
6:00pm – 8:50pm / Tuesday & Thursday

Instructor Information: Lenora Dawson, ldawson1@com.edu, 409-933-8305
ICB RM# 207-12 Office

Student hours and location:

ICB #207-12

Mon: 7a-8a; 11a-12p; 5p-6p

Tues: 4:30p-6p

Wed: 7a-8a; 11a-12p; 5p-6p

Required Textbook/Materials: PROCESS TECHNOLOGY OPERATIONS
NAPTA-2 ND EDITION
ISBN-13: 978-0-13-641991-4

FLASH OR THUMB DRIVE

Course Description:

Process Technology III – Operations is one of the eight core courses in the Process Technology Alliance curriculum, sponsored by the North American Process Technology Alliance (NAPTA, formerly GCPTA). The two-year program has been created to train students for careers as process technicians in the chemical and refining process industries. This course is typically taken in the 4th semester of the PTEC program.

The course uses existing knowledge presented the PTAC 1410 Equipment, PTAC 2420-Systems, and PTAC 1432- Instrumentation courses to bring together and understand the startup, normal operations, normal shutdown, turnarounds, and abnormal situations, as well as the process technician's role in performing the tasks associated with these concepts within an operating unit. The Envision Simulator will be utilized extensively.

Course requirements: (including description of any special projects or assignments)

All 4 tests will be done in the classroom.

All labs will be done on your computers.

The procedure homework assignment must be typed.

Individual Safety Presentations will be done orally in the classroom.

Syllabus Changes: The instructor reserves the right to make changes to this syllabus during the semester as needed to facilitate instruction and /or course needs.

Determination of Course Grade/Detailed Grading Formula:

Grading Scale:

500-450	=A
449-400	=B
399-350	=C
349-300	=D
Below 300	=F

Four Tests	330
Four Homework Assignments	80
Five Lab Exercises	90
TOTAL	500

Test 1	115
Test 2	35
Test 3	60
Test 4	120

Homework 1	10	Math
Homework 2	20	Procedure
Homework 3	20	LOTO
Homework 4	30	CYK-Checking Your Knowledge

Lab 1	10	Model 6
Lab 2	20	Model 8
Lab 3	20	Model 9
Lab 4	20	Model 10
Lab 5	20	Model 3

NOTE: Failure to turn in assigned homework assignments and labs, or to make a credible attempt will have the homework and lab grade entered as negative twice the homework and value. (e.g., if the homework is worth 10 points it will be entered as a -20). Homework and labs are due at the beginning of class (within the first 5 minutes). Late homework and labs will not be accepted.

Make-Up Policy: Tests not taken on the scheduled day (unless previously agreed to by the instructor) must be made up in 5 school days. **The test will receive no higher than 90% of the actual grade.**

Attendance Policy: Much of the learning occurs in the classroom setting through lectures and labs. It is difficult to learn all the concepts simply by reading the course textbook, although reading the textbook is essential to being successful in this course. Class participation is essential to learning. Many of the class sessions cover topics that have no handouts. Good note taking is important to be successful in this class. Many hands-on and group activities take place in the classroom. Attendance is taken each class period. **If you miss class and any activities that are graded, you will get a zero and no makeup tests are allowed.**

If you find that you are going to miss a scheduled class for any reason, please notify your professor by e-mail, as soon as possible. Contacting fellow classmates is highly encouraged to get details on missed assignments.

Electronic Devices: All electronic devices (e.g., cell phones, pagers, cameras, iPad, iPod, tape recorders, laptop computers and other devices) shall not be used in the classroom. This policy takes effect immediately as the student enters the classroom and remains in effect until the class session has been concluded for the day. Students using such devices during an exam will be expelled from the class and will receive an immediate “F” for the course. Hand-held calculators may only be used during an exam; no other electronic devices may be used.

Communicating with your instructor: ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means. (Faculty may add additional statement requiring monitoring and communication expectations via D2L or other LMS)

Core Objectives: Students successfully completing this course will demonstrate competency in the following Core Objectives:

1. **Critical Thinking Skills:** Students will demonstrate creative thinking skills, innovation, and ability to analyze, evaluate and synthesize information.
2. **Communication Skills:** Students will develop, interpret, and express ideas through written, oral, and visual communication.
3. **Personal Responsibility:** Students will demonstrate the ability to connect choices, actions and consequences to decision making.

Student Learner Outcome	Maps to Core Objective	Assessed via this Assignment
Operate various process systems	Critical thinking	Distillation Test
Write and follow safety and operational procedures	Communication-writing	LOTO assignment, procedure assignment
Collect and use data for determination of process specifications	Empirical and Quantitative skills	Lab exercises
Work in self-directed teams	Teamwork	Distillation Jeopardy, Survival, Egg Exercise

Academic Dishonesty: Any incident of academic dishonesty will be dealt with in accordance with college policy via the Student Handbook. Academic dishonesty – such as cheating on exams is an extremely serious offense and will result in a **grade of zero** on that exam and the student will be referred to the Office of Student Conduct for appropriate discipline action. **IN OTHER WORDS, If the student is caught cheating on any classwork of any kind, they get an immediate 0% for that grade. If two students copy each other’s work, both get zeros.”**

Student Concerns: If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact the PTEC Department Chair, Derrick Lewis at 409-933-8607 or email dlewis22@com.edu.

Course outline: Operations – Spring 2025 M/W General Schedule

**TUES/THURS
PTAC-OPERATIONS III
6:00pm-8:50pm**

Course outline: ****Schedule is subject to change at the discretion of the instructor based on instruction and/or course needs. ****

Week #	Topic	Reading Assignments & Homework Due Dates
1 1/14/25 Tue	Intro, Syllabus, Expectations, Explain Grading points, Run, Hide, Fight, and bring Thumb Drive	Read Chapter 1 Complete your CYK
1/16/25 Thur	Review of basic Chemistry and Physics Discuss Chapter 1 and CYK Discuss Math Problems	HW 1 Math Problems (10 points) (due 1/29/25)
2 1/21/25 Tue	HOLIDAY- MLK	
1/23/25 Thur	Simulators. Complete Lab 1, Model 6 in class	Complete Lab 1 (Model 6) (10 points) (due 1/22/25)
3 1/28/25 Tue	P&ID’s 1	Complete Lab 2 (Model 8) (20 points) (due 2/17/25) Read Chapter 3 Complete your CYK
1/30/25 Thur	Discuss Chapter 3 and CYK P&ID’s 2 HW 1 Math Problems due	HW 1 Math Problems due
4	Timtene Unit Intro	Read Chapter 9

2/4/25 Tue		Complete your CYK
2/6/25 Thur	Timtene Unit Utilities Discuss Chapter 9 and CYK	
5 2/11/25 Tue	Timtene Unit	Read Chapter 13 Complete your CYK
2/13/25 Thur	Discuss Chapter 13 and CYK PSM Handout Lab 2 (Model 8) due	Lab 2 (Model 8) due
6 2/18/25 Tue	Survival Questions	Complete Labs 3 & 4 (Models 9 & 10) (20 & 20 points) (due 3/12/25)
2/20/25 Thur	General Lab	
7 2/25/25 Tue	Exam 1-(115 points)	Read Chapter 6 Complete your CYK
2/27/25 Thur	Communication/Echo Communications Discuss Chapter 6 and CYK	Read Chapter 8 Complete CYK
8 3/4/25 Tue	Shift Change and Relief Discuss Chapter 8 and CYK	Read Chapter 7 Complete CYK
3/6/25 Thur	Procedures Discuss Chapter 7 and CYK	Read Chapter 4 Complete your CYK HW 2 Procedure (20 points) (due 3/26/25)
9 3/11/25 Tue	Exam 2-PSM Test (35 points) SHE Discuss Chapter 4 and CYK	Read Chapter 5 Complete your CYK
3/13/25 Thur	LOTO Discuss Chapter 5 and CYK Labs 3 & 4 (Models 9 & 10) due	HW 3 LOTO (20 points) (due 4/2/25) Labs 3 & 4 (Models 9 & 10) due Read Chapter 15 Complete your CYK
10 3/18/25 Tue	SPRING BREAK	
3/20/25 Thur	SPRING BREAK	

11 3/25/25 Tue	Emergencies / Film Diagnosis Discuss Chapter 15 and CYK	Complete Lab 5 (Model 3) (20 points) (due 4/9/25)
3/27/25 Thur	Eggs HW 2 Procedure due	HW 2 Procedure due
12 4/1/25 Tue	General Lab	Read Chapter 14 Complete your CYK
4/3/25 Thur	Maintenance Discuss Chapter 14 and CYK HW 3 LOTO due	Read Chapter 16 Complete your CYK HW 3 LOTO due
13 4/8/25 Tue	Unit Shutdown Discuss Chapter 16 and CYK SIMS Example	Read Chapter 10 Complete CYK
4/10/25 Thur	Unit Commissioning Discuss Chapter 10 and CYK Distillation / Boiling Points Lab 5 (Model 3 due)	Read Chapter 11 Complete your CYK Lab 5 (Model 3) due
14 4/15/25 Tue	Unit Startup Discuss Chapter 11 and CYK	Read Chapter 12 Complete your CYK
4/17/25 Thur	Operations Discuss Chapter 12 and CYK	Withdrawal Day- April 21, 2025
15 4/22/25 Tue	Jeopardy	
4/24/25 Thur	Exam 3–Envision Simulator test (60 points)	
16 4/29/25 Tue	Exam 4-(120 points)	
5/1/25 Thur	Questions	
17 5/6/25 Tue	Project Due	
5/8/25 Thur	General Lab	

Institutional Policies and Guidelines

Grade Appeal Process: Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook https://www.com.edu/student-services/docs/Student_Handbook_2023-2024_v2.pdf. *An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.*

Academic Success & Support Services: College of the Mainland is committed to providing students the necessary support and tools for success in their college careers. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

ADA Statement: Any student with a documented disability needing academic accommodations is requested to contact Kimberly Lachney at 409-933-8919 or klachney@com.edu. The Office of Services for Students with Disabilities is in the Student Success Center.

Textbook Purchasing Statement: A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy: Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1st 8-week session is February 26. The last date to withdraw from the 16-week session is April 21. The last date to withdraw for the 2nd 8-week session is April 30.

FN Grading: The FN grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The FN grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the FN grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an FN grade.

Early Alert Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you

will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer for you to meet your academic goals.

Resources to Help with Stress:

If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here <https://www.com.edu/community-resource-center/>. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at deanofstudents@com.edu or communityresources@com.edu.