



**Course Number and Section: PTAC-2420-111C3-FA2025**

**Name of Course: Process Tech II-SYSTEMS**

**Course Semester: Fall 2025**

**Time and days of course: Mon & Wed 9am-11:50am**

**Instructor Information:**

Ronald Gamble  
rgamble3@com.edu

**Student hours and location:**

Mon: 8am – 9:00am Rm.204  
Wed: 8am – 9:00am Rm.204.

**Required Textbook/Materials:**

Process System First edition  
Pearson (NAPTA)  
ISBN-13: 978-0-13-692904-8

**Course Description:** (catalog description)

Process Technology II – Systems is one of the eight core courses in the Process Technology Curriculum, sponsored by the North American Process Technology Alliance. The two-year program has been created to train students for careers as Process Technicians in the chemical and refining process, Oil and Gas exploration and production, Chemical manufacturing, Mining, Power Generation, Pulp and Paper, Water and Wastewater treatment, Food and Beverage manufacturing, and Pharmaceutical manufacturing industries. This course is a critical building block in preparation for PTAC Operations, Unit Operations and Troubleshooting. All prerequisites must be met.

Process Technology II – Systems introduces students to many processes industry related Systems concepts including basic systems, the purpose and function of specific process systems, the methods of controlling process systems and abnormal process conditions. A strong emphasis in distillation basics and operation will be pursued.

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

This is based on completion of all HW Assignments, Exams on time.

### **Other info regarding HW Assignments, Exams, Lab Work and Participation: (Course Req Cont.)**

- 1) Students are required to put **Name and Date** on their HW assignments, exams. Points will be deducted (at instructor's discretion) for not complying.
- 2) For HW's, assignments, etc., All **pages must be uploaded into D2L** – (loose pages will not be accepted). **Homework is due - on the due date or by the date specified on the D2L if an assignment is given electronically.**
- 3) Students are required to take exams in their own class, and during the allowed time only.
- 4) Students will turn in the same number of pages that are handed out during an exam. If not, you will get a score of zero for the exam. Also, students who do not turn in their exam (i.e. walk out with the exam) will get an **"F"** for the course.
- 5) Students **will not** make copies or take pictures of exams (including graded exams). This will result in an immediate **"F"** for the course.

### **Grading Policy**

#### **Homework (assignments) - 30%**

Homework assignments will be collected throughout the semester. As stated in the course requirements, all homework will be due at the beginning of class or by the date specified in blackboard if the assignment is given electronically. Late, unexcused work will not be accepted. Due dates and overall point values will be clearly stated.

#### **Exams – 40%**

There will be four tests given throughout the semester. Your tests are worth 40% each. Tests are cumulative to the lecture and textbook chapter content as announced by the instructor.

An unexcused absence will result in a test grade of zero.

If a student misses one exam for a valid, excused reason, the final exam can replace the missed grade. If a student does not have an exam exemption due to a valid, excused reason, the final exam can replace a student's lowest test grade. This only applies if it improves the final overall grade for the student.

#### **Lab work – 20%**

There will be 5-10 labs given throughout the semester. There is No makeup lab work.

## Participation – 10%

Classroom participation refers to the active engagement of students in the learning process during lectures, discussions, and other educational activities within a classroom setting. It involves: 1. Attendance and punctuality, 2. Quality of contributions to discussions, 3. Engagement in activities and group work, 3. Demonstrated understanding of course material.

**Determination of Course Grade/Detailed Grading Formula:** (methods of evaluation to be employed to include a variety of means to evaluate student performance)

### Late Work, Make-Up, and Extra-Credit Policy:

1. Make-up exams should be scheduled with your instructor ASAP (preferably prior to the exam), and should be taken by the next class period or within 5 working days of the original date, whichever comes first. Penalty for make-up exams will be a deduction of 10% of the score made, unless the make-up exam was scheduled prior to the original exam date. After 5 working days, a grade of 0 (zero) will be entered for that exam. At the instructor's discretion, make up exams may be in a different format from the scheduled exam.
2. Make up exams will not be allowed after 5 working days past their original date. This will be strictly enforced. **Only 1 make-up exam will be allowed (with excused absence only).**
3. Students who walk out of an exam will be given a score of zero for it. There will not be a makeup of that exam.
4. Late or make up homework/assignments will not be allowed. This will be strictly enforced. A grade of zero will be given in those cases.
5. Make up exams, graded homework, class handouts and other works are the responsibility of the student and not that of the Instructor.
6. No Extra credit will be given

**Attendance Policy:** Students are expected to attend class and participate

**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)

Student Learner Outcome	Maps to Core Objective	Assessed via this Assignment
1. 1. Describe the purpose and function of common process systems	Critical Thinking Empirical and Quantitative	HW's, Exams, Class attendance & participation

	skills Personal responsibility and attendance	
2. 2.Explain and demonstrate the operation of each process system	Critical Thinking Empirical and Quantitative skills	HW's, Exams, Lab work

### **Academic Dishonesty:**

Any incident of academic dishonesty will be dealt with in accordance with college policy and the Student Handbook. Academic dishonesty – such as cheating on assignments (copying someone else's assignments in part or in full) or exams is an extremely serious offense and will result in a **grade of zero** and the student will be referred to the Office of Student Conduct for the appropriate discipline action.

**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 (Mr. Derrick Lewis / (409) 933- 8607 / [dlewis22@com.edu](mailto:dlewis22@com.edu)).

**Course outline:** (include calendar with lecture topics, due dates)

### **Course Schedule\*:**

Week#	Topic (Read chapters prior to class)	Assignments, Exams, Due Dates (TBA)
1	Intro + Syllabus Review + Classroom Expectations + Explain Grading % + General Review	
	Lecture: Chapter. 1 Introduction to Systems	
2	Lecture: Chapter. 2 Water Systems	
	Lecture: Chapter. 3 Wastewater Systems Lab work	
3	Lecture: Chapter. 4 Gas Systems	
	Lecture: Chapter. 5 Electrical Power Distribution System <b>Lab work</b>	
4	Exam #1 Review	
	<b>Exam #1 (Chapters 1-5)</b>	
5	Lecture: Chapter. 7 Steam Systems	
	Lecture: Chapter 13 Furnace Systems Lab work	

6	Lecture: Chapter 8 Combustion Systems (Waste Treatment)	
	Lab work	
7	Exam 2 Review	
	<b>Exam 2 (Chapters, 7, 8, &amp;13)</b>	
8	Lecture: Chapters 10 Reactor System Fundamentals	
	Lecture: Chapters 11 Batch Reactor Systems Lab work	
9	Lecture: Chapters 12 Continuous Reactor Systems	
	Lecture: Chapters 16 Distillation Systems <b>Lab work</b>	
10	General System's Review	
	Exam # 3 Review	
11	<b>Exam # 3 (10, 11, 12, &amp; 16)</b>	
	Lectures: Chapter 9 Refrigeration Systems Lab work	
12	Lectures: Chapter 6 Storage and blending systems	
	General review of Chapters 6 & 9 Lab work	
13	Lectures: Chapter 14 Filtration System	
	Lectures: Chapter 15 Adsorption Systems Lab work	
14	Lectures: Chapter 17 Extraction Systems	
	Lectures: Chapter 18 Absorption and Stripping Systems Lab work	
15	Exam #4 Review (6, 9, 14, 15, 17, 18)	
16	Final Exam	
	Student Meetings	

**\*Schedule is subject to change at the discretion of the instructor.**

**The instructor reserves the right to make changes to this syllabus & the schedule during the semester as needed to facilitate instruction and/or course needs.**

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## 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/student-handbook.html>. *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 accommodation is requested to contact:

Kimberly Lachney, Student Accessibility Services Coordinator

Phone: 409-933-8919

Email: [AccessibilityServices@com.edu](mailto:AccessibilityServices@com.edu)

Location: COM Doyle Family Administration Building, 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 1<sup>st</sup> 8-week session is October 1. The last date to withdraw from the 16-week session is November 14. The last date to withdraw for the 2<sup>nd</sup> 8-week session is November 25.

**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 in order 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](mailto:deanofstudents@com.edu) or [communityresources@com.edu](mailto:communityresources@com.edu).

**Nondiscrimination Statement:**

The College District prohibits discrimination, including harassment, against any individual on the basis of race, color, religion, national origin, age, veteran status, disability, sex, sexual orientation, gender (including gender identity and gender expression), or any other basis prohibited by law. Retaliation against anyone involved in the complaint process is a violation of College District policy.