



PTAC-2420-211CL
System
Spring 2022
T-TH 6pm-8:50pm
Room TVB-1559

Instructor Information:

Jeff Hartschuh
jhartschuh@com.edu
409-933-8536 – (Patty England)

Student hours and location: TVB-1559

- Tuesday / Thursday 5:30-6:00 PM and 8:50 – 9:20 PM

Required Textbook/Materials:

Systems Textbook: Process Technology Systems by Speegle (ISBN: 978-1-4180-3999-8)

Optional, NOT REQUIRED

Pocket Reference by Thomas Glover (Black Book) (ISBN: 978-1-885071-62-0)

Course 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 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 process 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:

This is based on completion of all HW's, Assignments, Quizzes and Exams on time.

Other info regarding HW's, Assignments, Quizzes and Exams:

- 1) Students are required to put **Name and Date** on their HW's, assignments, quizzes and exams. Points will be deducted (at instructor's discretion) for not complying.
- 2) For HW's, assignments, etc., **pages must be stapled** – (loose pages will not be accepted). **Homework is due at the beginning of class - on due date. Homework can also be turned in on Blackboard. Attach your work and have it turned in by the due date. Due date for homework will be at the beginning of class of Tuesday following the study week. (Example: Week 2 homework will be due 1/25/22.) The due dates are listed on course outline.**
- 3) Students are required to take quizzes and exams with their own class, and during the allowed time only.
- 4) Students will turn in the same number of pages that are handed out during a quiz or an exam. If not, you will get a score of zero for the quiz or the exam. Also, students who do not turn in their quiz or exam (i.e. walk out with the quiz or the exam) will get an **"F"** for the course.
- 5) Students **will not** make copies or take pictures of quizzes and exams (including graded). This will result in an immediate **"F"** for the course.

Classroom Conduct Policy:

College of the Mainland requires that students enrolled at COM be familiar with the Standards of Student Conduct, which can be found in the on-line Student Handbook. Students should act in a professional manner at all times. Disruptive students will be held accountable according to college policy. Any violations of the Code of Conduct will result in a referral to the Office for student Conduct.

Electronic Devices: All electronic devices (e.g. cell phones, pagers, cameras, ipads, ipods, 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.** An initial violation of this policy by the student during the semester will result in five points being deducted from the student's final semester grade. A second violation by the student will result in another five points being deducted from the student's final grade. Subsequent violations will result in **all** students in the class losing 1% for each subsequent occurrence. 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 only may be used during an exam; no other electronic devices may be used.

Determination of Course Grade/Detailed Grading Formula:

Grading is based on total percentage point system:

(Grading subject to change at the discretion of the instructor)

Homework & Quizzes (Combined Total)	10% (Weighted % Score)
4 Exams (17.5% Each)	70%
Final Exam (20%)	20%

TOTAL SCORE = 100%

Grading Scale:

- A = 90 - 100%
- B = 80 - 89%
- C = 70 - 79%
- D = 60 - 69%
- F = Below 60%

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. **There will be no make for the Final 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, homework, class handouts and other works are the responsibility of the student and not that of the Instructor.

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. 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 make ups 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. Making contact with fellow classmates is highly encouraged to get details on missed assignments.

Attends class and is punctual – The student attends every class period, arrives on time for class activities or informs the instructor in a timely manner of unavoidable situations that cause the student to be late or miss class. **Whatever we cover, will not be repeated.**

Note: “Attendance Log” sign-in is the responsibility of the student. If not signed in, you will be recorded as being absent for that class. After the fact sign-in will not be allowed.

After 6 missed classes you can be dropped from class.

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 Blackboard 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 skills Personal Responsibility - attendance	HW's, Quizzes, Exams, Class attendance & participation
2. Explain and demonstrate the operation of each process system	Critical Thinking Empirical and Quantitative skills	HW's, Quizzes, Exams

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.

Plagiarism: Plagiarism is using someone else’s words or ideas and claiming them as your own. Plagiarism is a very serious offense. Plagiarism includes paraphrasing someone else’s words without giving proper citation, copying directly from a website and pasting it into your paper, using someone else’s words without quotation marks. Any assignment containing any plagiarized material will receive 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).

General Schedule:

Spring 2022 Course Schedule*:

Week#	Day/Date	Topic (Read chapters prior to class)	Assignments, Quizzes & Due Dates (TBA)
1	T 1/18/22	Intro + Syllabus + Expectations + Explain Grading % + General Review	
	TH 1/20/22	L: GENERAL REVIEW	Equipment/Instrumentation quiz
2	T 1/25/22	L: CHP. 1,2, 3 > WATER SYSTEMS,	Chapter 1,2,3 Review Questions
	TH 1/27/22	L: CHP. 4, 5 > COOLING TOWER + COOLING WATER SYSTEM	Chapter 4 and 5 Review Questions
3	T 2/01/22	L: CHP. 6,10,12 > PLANT AIR, INSTR AIR, NITROGEN, ELECT, REFRIGERATION	Week 2 Homework due first of class. Chapter 6, 10 and 12 Review Questions
	TH 2/03/22	General Overall Review and Review for EXAM #1	
4	T 2/08/22	EXAM # 1	Week 3 Homework due first of class. Exam #1 (Timed & Beginning of Class)
	TH 2/10/22	L: CHP. 11 > RELIEF & FLARE + THERMAL OXIDIZER	Chapter 11 Review Questions

5	T 2/15/22	L: CHP. 8,> BOILERS, STEAM GENERATION AND BFW SYSTEMS	Week 4 Homework due first of class. Chapter 8 Review Questions
	TH 2/17/22	L: CHP. 9 > STEAM DISTRIBUTION, CONDENSATE SYSTEMS	Chapter 9 Review Questions
6	T 2/22/22	L: CHP. 18 > REACTORS	Week 5 Homework due first of class. Chapter 18 Review Questions
	TH 2/24/22	General Overall Review and Review for EXAM #2	
7	T 3/01/22	EXAM # 2	Week 6 Homework due first of class. Exam #2 (Timed & Beginning of Class)
	TH 3/03/22	L: CHP. 21, 22 > FILTRATION, DRYING	Chapter 21 and 22 Review Questions
8	T 3/08/22	L: CHP. 23 > MATERIAL STORAGE	Week 7 Homework due first of class. Chapter 23 Review Questions
	TH 3/10/22	L: CHP. 24 > ENVIRONMENTAL COMPLIANCE SYSTEMS	Chapter 24 Review Questions
	3/14-3/18	SPRING BREAK NO CLASS	
9	T 3/22/22	L: CHP. 7,14 > NATURAL & FUEL GAS, FURNACES / COMBUSTION PART 1	Week 8 Homework due first of class.
	TH 3/24/22	L: CHP. 7,14 > NATURAL & FUEL GAS, FURNACES / COMBUSTION PART 2 General Overall Review and Review for EXAM #3	Chapter 7 and 14 Review Questions
10	T 3/29/22	EXAM # 3	Week 9 Homework due first of class. Exam #3 (Timed & Beginning of Class)
	TH 3/31/22	L: CHP. 15, 16,> EXTRACTION, ADSORPTION	Chapter 15 and 16 Review Questions
11	T 4/05/22	L: CHP. 17 & 19 > ABSORPTION and STRIPPING, CENTRIFUGE SYSTEM	Week 10 Homework due first of class. Chapter 17 & 19 Review Questions
	TH 4/07/22	L: CHP. 13 > DISTILLATION > PART-1	
12	T 4/12/22	L: CHP. 13 > DISTILLATION > PART-2	Week 11 Homework due first of class. Chapter 13 Review Questions
	TH 4/14/22	LAB: UNIT DISTILLATION MODEL	LAB

13	T 4/19/22	CHP. 20 CRYSTALLIZATION	Week 12 Homework due first of class.
	TH 4/21/22	GENERAL REVIEW and Review for EXAM #4	Chapter 20 Review Questions
14	T 4/26/22	EXAM # 4	Week 13 Homework due first of class. Exam #4 (Timed & Beginning of Class)
	TH 4/28/21	LAB: UNIT DISTILLATION MODEL	
15	T 5/05/22	MISC. / Q&A / Tour of GSU, Boiler, Chiller General Overall Review and Review for FINAL EXAM	
	TH 5/07/22	FINAL EXAM	Final Exam (Timed & Beginning of Class)
16	T 5/12/22	• Semester de-briefing + Unit Ops preview • Final Grades LAST DAY OF CLASS	

*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.

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://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.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.* https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf

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 Holly Bankston at 409-933-8520 or hbankston@com.edu. The Office of Services for Students with Disabilities is located in the Student Success Center.

Counseling Statement: Any student needing counseling services is requested to please contact Holly Bankston in the student success center at 409-933-8520 or hbankston@com.edu. Counseling services are available on campus in the student center for free and students can also email counseling@com.edu to set up their appointment. Appointments are strongly encouraged; however, some concerns may be addressed on a walk-in basis.

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 October 6. The last date to withdraw from the 16-week session is November 19. The last date to withdraw for the 2nd 8-week session is December 2.

F_N Grading: The F_N grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The F_N 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 F_N grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an F_N grade.

Early Alert Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention is 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.

COVID-19 Statement: All students, faculty, and staff are expected to familiarize themselves with materials and information contained on the College of the Mainland’s Coronavirus Information site at www.com.edu/coronavirus. In compliance with Governor Abbott's May 18 Executive Order, face coverings/masks will no longer be required on COM campus. Protocols and college signage are being updated. We will no longer enforce any COM protocol that requires face coverings. We continue to encourage all members of the COM community to distance when possible, use hygiene measures, and get vaccinated to protect against COVID-19. Please visit com.edu/coronavirus for future updates.
