Course Number and Section (PTAC-2346-101C6)

Name of Course (Process Troubleshooting)

Course Semester (Summer 2025)
ICB Room 219

Tuesday-Thursday 8:00am-12:50pm

Instructor Information:
Derrick Lewis
dlewis22@com.edu

409-933-8607 Office
Students may also contact the COM PTEC Administrative Office to leave a message for the instructor by contacting:
Patricia England, Administrative Assistant
Phone: 409-933-8536
E-Mail: *pengland@com.edu*

Student hours and location:
Also available by email, text or phone call as requested throughout semester.
Office hours and location: ICB 207

- M-W
  2:30pm-4:30pm
- T-Th 2:00 pm-:4pm

ISBN: 2818560049296

Course Description:
This course provides instruction in the different types of troubleshooting techniques, procedures, and methods used to solve process problems. Topics include application of data collection and analysis, cause-effect relationships, and reasoning. Students will

explain steps in troubleshooting models; demonstrate use of troubleshooting tools; and apply troubleshooting techniques to process problems using combination of in class group assignments, homework and hands-on simulator and lab activities. Prerequisite: PTAC 2420

Course requirements:
On successful completion of this course students will be able to:

1. Collect data and identify techniques for troubleshooting.
2. Utilize applicable troubleshooting methods to solve process problems.
3. Diagnose malfunction or abnormality associated with process problems.
4. Remedy equipment/process malfunction associated with plant problems.

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

1. Reading: Ability to analyze & interpret a variety of language based & media materials
2. Writing: Competency is the ability to produce clear, correct, & coherent prose adapted to purpose, occasion & audience
3. Speaking: Competency is the ability to communicate orally in clear, coherent & persuasive language adapted to purpose
4. Listening: At the college level is the ability to analyze & interpret various forms of auditory expression
5. Critical Thinking: Embraces methods for applying qualitative skills analytically to subject matter in order to evaluate arguments & to construct alternate strategies Creativity: Means novel product, activity or interaction demonstrating originality &/or flexibility
6. Computer Literacy: is the ability to use & apply technology in communicating, problem solving, acquiring & processing information
7. Mathematical Literacy: Ability to apply mathematical tools including technology to develop, solve, & interpret mathematical models
8. Cultural Competence: Ability to develop & demonstrate awareness, knowledge, attitudes, & skills necessary to interact in a diverse & globally interdependent world

Determination of Course Grade/Detailed Grading Formula:
6 Quizzes 20% each
Mid Term 80%
Final 80%

Late Work, Make-Up, and Extra-Credit Policy:
No make-up quizzes or exams are allowed. A **grade of zero** will be given for any quiz or test not completed by the deadline unless special arrangements are made with instructor

BEFORE scheduled due date of quiz or exam

Attendance Policy:
Students are required to be in class on scheduled class days. If you have to miss a scheduled class for any reason, please contact instructor **BEFORE** start of class explaining reason for absence. Please see **FN Grading** section below for further attendance-related information in your student handbook.

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. Utilize applicable troubleshooting methods to solve process problems.	Communication Skills	Reading comprehension assessed via testing. Word Problems during class, on homework and on tests
2. Diagnose malfunction or abnormality associated with process problems.	Critical Thinking Skills	Reading comprehension assessed via testing. Word Problems during class, on homework and on tests
3. Diagnose malfunction or abnormality associated with process problems.	Critical Thinking Skills	Reading comprehension assessed via testing. Word Problems during class, on homework and on tests
4. Remedy equipment/process malfunction associated with plant problems.	Critical Thinking Skills	Reading comprehension assessed via testing. Word Problems during class, on homework and on tests
5. Work in self-directed teams	Teamwork	Interacting with classmates to troubleshoot and solve process problems

Academic Dishonesty:

Any incident of academic policy will be dealt with in accordance with college policy and

the Student Handbook. Academic dishonesty – such as cheating on quizzes or exams is an extremely serious offense and will result in a **grade of zero** on that quiz or exam and the student will be referred to the Office of Student Conduct for the appropriate disciplinary 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 Process Technology Department Chair, Derrick Lewis, at dlewis22@com.edu or 409-933-8607.

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

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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/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, Student Accessibility Services Coordinator
Phone: 409-933-8919 Email: 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 1st 5-week session is June 30. The last date to withdraw from the 10-week session is July 29. The last date to withdraw for the 2nd 5-week session is August 1.

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 or 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.

Course outline 10 Week Calendar June 3 – August 9, 2024*

Week #	Topic	Assignments
1	Review course objectives, expectations and syllabus, Review of Equipment and Instrumentation	Review Syllabus Equipment and Instrumentation quiz and correction review
2	Chapter 1 Basic Process Troubleshooting Complete Chapter 1	Read Chapter 1 (Before class) Chapter 1 Quiz (Beginning of class) Lecture Chapter 1 Slide Pack Tank Simulator Drawing & Activity #1
3	Chapter 1 Review Chapter 2 Decanter System	Chapter 1 Q/A Read Chapter 2 (Before Class) Chapter 2 Quiz (Beginning of class) Lecture Slide Pack Chapter 2 Lesson 2.2 Exercise 2.2 & 2.3
4	Finish Chapter 2 and review Chapter 3 Reactor System	Chapter 2 Q/A Read Chapter 2 (Before class) Chapter 3 Quiz (Beginning of class) Lecture Slide Pack Chapter 3 Lesson 3.2 Exercise 3.2 and 3.3 Homework #6
5	Finish Chapter 3 Reactor System and review Chapter 4 Steam Generation System	Chapter 3 Q/A Read Chapter 4 (Before class) Chapter 4 Quiz (Beginning of class) Lecture Chapter 4 Slide Pack Lesson 4.2 Exercise 4.2
6	Finish Chapter 4 and review	Chapter 4 Q/A
7	Exam Chapters 1- 4 Chapter 5 Distillation	Chapters 1 – 4 Mid Term Exam Read Chapter 5 (Before Class) Chapter 5 Quiz (Beginning of class) Lecture Chapter 5 Slide Pack Exercise 5.1 Lesson 5.2 Exercise 5.2

8	**Finish Chapter 5 Distillation** **Chapter 6 Absorption and Stripping System**	**Chapter 5 Q/A** **Read Chapter 6 (Before Class)** **Chapter 6 Quiz (Beginning Of class)** **Lecture Chapter 6 Slide Pack** **Lesson 6.** **Exercise 6.2 Exercise 6.3**
9	**Finish Chapter 6 Absorption and Stripping System Review** **Review Chapter 5 and 6**	**Chapter 6 Q/A** **Review Q/A**
10	**Chapter 5 and 6 exam**	**Chapter 5 and 6 final exam**

***Schedule is subject to change at discretion of instructor**