



**Course Number and Section (PTAC-1332-221CL)**  
**Process Instrumentation**  
**Spring 2022**  
**Tuesday/Thursday 6:00PM to 8:20 PM**

**Instructor Information:** Angela Magee, [amagee1@com.edu](mailto:amagee1@com.edu), 281-636-4332

**Student hours and location:** Tues/Thurs 5:30PM and by appointment

**Required Textbook/Materials:** Instrumentation ISBN: 9780137004133

**Course Description:** This course is the study of instruments and instrument systems used in chemical processing industry, including terminology, primary variables, symbology, control loops, and basic troubleshooting. Students will identify and explain the function of instruments used in the chemical processing industry; explain the relationship of process control elements in a control loop; and define and apply terms and symbols used in instrumentation. Prerequisite: PTAC 1302, MATH 0310.

**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.

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

Reading: Ability to analyze & interpret a variety of language based & media materials

Writing: Competency is the ability to produce clear, correct, & coherent prose adapted to purpose, occasion & audience

Speaking: Competency is the ability to communicate orally in clear, coherent & persuasive language adapted to purpose

Listening: At the college level is the ability to analyze & interpret various forms of auditory expression

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

Computer Literacy: is the ability to use & apply technology in communicating, problem solving, acquiring & processing information

Mathematical Literacy: Ability to apply mathematical tools including technology to develop, solve, & interpret mathematical models

Cultural Competence: Ability to develop & demonstrate awareness, knowledge, attitudes, & skills necessary to interact in a diverse & globally interdependent world

<b>Student Learner Outcome</b>	<b>Maps to Core Objective</b>	<b>Assessed via this Assignment</b>
1. Explain the function of the various instruments used in the process industry	Reading, Critical Thinking, Computer literacy	Lab exercises, presentation
2. Diagram the process control elements in a control loop	Reading, Critical Thinking, Computer literacy, creativity	Lab exercises, presentation
3. Utilize terms and symbols in instrumentation; and interpret process flow diagram and piping and instrumentation drawing	Reading, Critical Thinking, Computer literacy, creativity	Lab exercises, presentation

**Determination of Course Grade/Detailed Grading Formula:  
Grading Scale:**

<b>90-100</b>	<b>A</b>
<b>80-89</b>	<b>B</b>
<b>70-79</b>	<b>C</b>
<b>69-0</b>	<b>F</b>

**Grading Policy**

The student will be evaluated using the criteria listed below. All tests will be given during normal class time. You will not be allowed to collaborate with your classmates on the tests.

<b>Chapter Assignments</b>	<b>25%</b>
<b>Chapter Exams (4-6)</b>	<b>40%</b>
<b>Final Exam—3 parts</b>	<b>30%</b>
<b>Written Part 40%</b>	
<b>P&amp;ID Work 25%</b>	
<b>Unit Identification 35%</b>	
<b>Attendance and Participation</b>	<b>5%</b>

Attendance/Participation grade (5%) is calculated as follows:

- 50% of your grade is attendance
- 50% of your grade is your homework average

**Failure to turn in homework affects your grade in 2 different aspects. You will not do well in the class without turning in homework!**

**Throughout the semester there may be options for extra credit. Extra Credit is given only as a class option. Individual extra credit in an attempt to raise your grade is not given. The best way to ensure success in this class is to do your homework!**

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

Make-up Exams are NOT given. In the event a student misses a scheduled exam, the written portion of the final exam will be used in lieu of the missing test grade. For example, if a student misses test 2, the test will not be given as a makeup. When the student takes the final exam written portion, that grade will be factored in for test 2 makeup exam. If the student makes an 85 on the final written portion of the class, he will also make an 85 on test 2.

There is NO make-up of quizzes, labs, reports or homework after the designated Homework close date. Those that are missed will receive a 0.00 grade.

### **Blackboard**

This class utilizes Blackboard for all assignment submissions unless otherwise instructed. All assignments are submitted and graded through Blackboard. All assignments have a designated due date in Blackboard. You may submit any assignment as long as the Blackboard submission window is available. Once the Blackboard submission window is removed, **NO ADDITIONAL HOMEWORK WILL BE ACCEPTED!**

**Manual homework submissions will NOT be accepted. If they don't go through Blackboard, they don't get graded. Don't wait until the last minute to try and submit your homework! Blackboard does have technical issues and scheduled maintenance work from time to time!**

**All homework submissions must be attached as a file in blackboard for grading. No picture submissions are allowed unless specifically noted by the instructor. COM has computer labs that you can use to prepare and submit your work in Blackboard.**

**\*\*All written assignments will be submitted through Safe Assign in Blackboard to check for plagiarism. If the Safe Assign check is higher than 50% without documented resources, the assignment will be given a zero with no option to resubmit.\*\***

Your student grade to date is always visible in Blackboard. This grade is a running total and is usually up to date after each test is posted. In addition, the number of absences you have missed is also available for your viewing.

Lectures and test reviews are posted in Blackboard directly following each class. It is the responsibility of the student to review Blackboard in a timely fashion to print out study materials as needed.

In addition, Blackboard is used as a tool to convey messages to students throughout the semester. Please check it as frequently as possible.

**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.

**Absence Chart**

16 Week Classes		
Sections who meet:	1 Class Day per Week	2 class Days per Week
Early warning	Second class day missed	Third class day missed
PTEC warning	Third class day missed	Fifth class day missed
Instructor Drop Eligible	Forth class day missed	Sixth class day missed

10 Week Classes		
Sections who meet:	1 Class Day per Week	2 class Days per Week
Early warning	First class day missed	Second class day missed
PTEC warning	Second class day missed	Third class day missed
Instructor Drop Eligible	Third class day missed	Fourth class day missed

Attendance data will be provided to future employers at their request.

**\*\*If you decide to drop the class, DO NOT RELY ON THE INSTRUCTOR TO DROP YOU AT THE 6<sup>TH</sup> CLASS DAY MISSED\*\***

**If you know you are no longer going to come to class, it is the responsibility of the student to drop the class. Failure to do so may result in you receiving a grade of “F” in the class.**

If you find that you are going to miss a scheduled class for any reason, please notify your professor, or leave a voice message/text or e-mail, as soon as possible. Makeup work is the responsibility of the student and making contact with fellow classmates is highly encouraged to get details on missed assignments. Leaving the class early (before being released by the Instructor) may result in an absence.

**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 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 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.

**\*\*All written assignments will be submitted through Safe Assign in Blackboard to check for plagiarism. If the Safe Assign check is higher than 50% without documented resources, the assignment will be given a zero with no option to resubmit.\*\***

**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 Process Technology Department Head

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**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.

<http://www.com.edu/student-services/student-handbook.php> . 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 and may result in dismissal from this class.

No student has the right to disrupt the learning process of other students. Students found to be disruptive by the instructor will be expelled from class. **Multiple disruptions may result in expulsion from the course, with the grade of an "F" for the class.**

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**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.

**Course outline:**

Refer to initial class presentation for exact outline. We will cover all chapters in the Instrumentation Textbook. Tests and semester guidelines are covered in that document. This preliminary outline is subject to change.

<b>Week</b>	<b>Text Covered</b>
<b>1</b>	Chapter 1 & 2 Homework CH 2—3 assignments
<b>2</b>	Chapter 3 & 4 Homework CH 3—4 assignments Homework CH 4 –2 assignments
<b>3</b>	Test 1 & Chapter 5 Homework CH 5 –2 assignments
<b>4</b>	Chapter 6 & Chapter 7 Homework CH 7 –1 assignment
<b>5</b>	Test 2 & Chapters 8-9 Homework CH 8-9—3 assignments
<b>6</b>	Chapter 8-10 and Chapter 11 Homework CH8-10—3 assignments Homework CH 11—3 assignments
<b>7</b>	Test 3 and Chapter 12 Homework CH 12—P&ID Project
<b>8</b>	Spring Break
<b>9</b>	Chapter 16-17
<b>10</b>	Chapter 18 and 15
<b>11</b>	Chapter 14 and Test 4
<b>12</b>	Chapter 19-21
<b>13</b>	Project Work Week Swiss Cheese Model

	P&ID Work
14	Chapter 22,24 & 13
15	Test 5 & Chapter 23
16	Final Exam Review and Final Exam

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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://build.com.edu/uploads/sitecontent/files/student-services/Student\\_Handbook\\_2019-2020v5.pdf](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](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](mailto: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](mailto:hbankston@com.edu). Counseling services are available on campus in the student center for free and students can also email [counseling@com.edu](mailto: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 1<sup>st</sup> 8-week session is March 2. The last date to withdraw from the 16-week session is April 25. The last date to withdraw for the 2<sup>nd</sup> 8-week session is May 4.



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

**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](http://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](http://com.edu/coronavirus) for future updates.