

Instructor Information

Instructor	Kenneth Ballou
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Phone	(409) 984-6367
Office	Umphrey Industrial Technology Center - Room: 201E
Office Hours	By appointment only.
Additional Contact Information	

Course Information

Description	Instruction in the different types of troubleshooting techniques, procedures, and methods used to solve process problems.
Required Textbooks	<i>Textbook Purchasing Statement: A student attending Lamar State College Port Arthur 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.</i> Process Technology Troubleshooting by Charles Thomas , Publisher-Delmar Cengage ISBN-10: 1-4283-1100-9 / ISBN-13: 978-1-4283-1100-8
Additional Materials/Resources	None.
Corequisites/Prerequisites	PTAC-2420 / PTAC-1432
Learning Outcomes	1. List methods and models associated with process troubleshooting. (PSLO 1); measured by embedded test questions, demonstration using computer simulation programs. 2. Identify different types of troubleshooting techniques used to troubleshoot equipment specific to various types of process operations. (PSLO 2&4); measured by embedded test questions, demonstration on actual process equipment and using computer simulation programs. 3. Demonstrate ability to employ applicable troubleshooting methods to solve process problems. (PSLO 4&5); measured by embedded test questions, demonstration on actual process equipment and using computer simulation programs. 4. Interpret data collection and analysis, their cause and effect relationships, and use reasoning to diagnose process problems. (PSLO 3&5); measured by embedded test questions, class discussion, demonstration on actual process equipment and using computer simulation programs and interpretation of schematics and diagrams. 5. Follow safety procedures employed during troubleshooting process problems. (PSLO 6); measured by embedded test questions, class discussion and demonstration on actual process equipment and using computer simulation programs. 6. Identify all main ideas, supporting details, and vocabulary in reading material. Demonstrate a full understanding of the reading. (PSLO 5); measured by embedded test questions, class discussions..
Program Student Learning Outcomes	•Use technology to access operator-specific documentation and training. •Identify specific equipment and operating parameters to meet industry standards. •Describe the principles of quality control. •Diagram the process control elements in a control loop. •Identify basic processes, equipment, and systems to meet industry standards. •Implement standard safety procedures as required in industry.
Lecture Topics Outline	Week 1: Introduction to course, review of syllabus, overview of Process Technology Troubleshooting Chapters 1-4 (Introduction to Process Instrumentation and Troubleshooting, Process Symbols and Diagrams, Understanding Process Equipment, Introduction to Control Loops.) Week 2: Overview of Chapters 5-8 (Statistics, Quality Tools, and Troubleshooting Techniques, Control Charts, Introduction to Process Troubleshooting, Pump Model Discussion of Failure Scenarios.) Week 3: Overview of Chapters 9-13 (Compressor Model, Heat Exchanger Model, Cooling Tower Model, Boiler Model, Furnace Model.) Week 4: Overview of Chapters 14-17 (Distillation Model, Reactor Model, Separation Model, Multivariable Plant.) Week 5: Discuss Troubleshooting scenarios., Final Review Week 6: Final
Major Assignments Schedule	Week 1: Introduction to course, complete Chapters 1-4 Week 2: Exam 1 (Chapters 1-4), complete Chapters 5-8 Week 3: Exam 2 (Chapters 5-8), complete Chapters 9-13 Week 4: Exam 3 (Chapters 9-13), complete Chapters 14-17 Week 5: Exam 4 (Chapters 14-17), review for final, complete any outstanding assignments Week 6: Final Exam
Final Exam Date	August 7, 2026 - 7:0 AM Through August 9, 2026 - 11:59 PM
Grading Scale	90 - 100=A 80 - 89=B 70 - 79=C 60 - 69=D Below 59 = F

**Determination of
Final Grade**

Chapter Tests-30%, Quizzes/homework/-30% Final Exam-30% Labs-10%

Course Policies

Instructor Policies

I will not discuss your grades over the phone or by e-mail. If you want to discuss your grades, you must come to my office in person. You will have 4 Major Tests and a Final Exam in this class. All tests and the exam are taken on Blackboard on a specified day. There are "NO MAKEUPS OR RETAKES" if instructor is not notified. If you miss "ONE" Test, your current test average will be given for that test. If you miss more than one test, you will receive a zero for each additional test you miss. Homework must be completed on time, 15 PTS will be deducted each class day late, for two class days. Homework more than 2 class days late will not receive a grade higher than 75. Homework can be hand written or uploaded to Blackboard in a document format. Students that are disruptive in class will be asked to leave and counted absent for the day. E-Mail/Voice Mail Etiquette: Students must use appropriate e-mail etiquette when corresponding with instructor; for example, complete sentences and a full subject line with your name/course name. Voice mail messages should be clearly spoken identifying students name, course, and any return phone number. Taking the Final Exam is required to complete the course.

Attendance Policy

Poor attendance is a leading reason for termination from a job in all areas of employment. With this factor in mind, the instructor monitors student attendance daily. In addition, attendance on a regular basis is necessary for proper skill development. A tardy is an absence for attendance purposes. 4 absences = one letter grade drop 6 absences = two letter grade drop 8 absences = automatic failure of class Students are responsible for completing all assigned homework, including reading assignments, by the required due dates and for being prepared for each class meeting. This applies even if you were absent from the previous class meeting.

Additional Information

Institutional Policies

MyLSCPA

Be sure to check your campus email and Course Homepage using MyLSCPA campus web portal. You can also access your grades, transcripts, academic advisors, degree progress, and other services through [MyLSCPA](#).

Academic Honesty

Academic honesty is expected from all students, and dishonesty in any form will not be tolerated. Please consult the LSCPA policies (Academic Dishonesty section in the Student Handbook) for consequences of academic dishonesty.

ADA Considerations

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the [Disability Services Coordinator](#), Room 117, in the Student Success Center. The phone number is (409) 984-6241.

COVID 19 Information

The Lamar State College Port Arthur (LSCPA) Student Code of Conduct COVID 19 Policy requires students who have been diagnosed with COVID 19 to report their condition directly to their local health department. Students should also contact their course faculty to report their quarantine status. In addition, this policy requires all students to wear face coverings when directly exposed to COVID 19 in compliance with the criteria included in the policy. For more information please refer to the COVID 19 link on the LSCPA website.

Facility Policies

No food or tobacco products are allowed in the classroom. Only students enrolled in the course are allowed in the classroom, except by special instructor permission. Use of electronic devices is prohibited.

HB 2504

This syllabus is part of LSCPA's efforts to comply with Texas House Bill 2504.

**Mandatory Reporting of
Child Abuse and Neglect**

As per Texas law and LSCPA policy, all LSCPA employees, including faculty, are required to report allegations or disclosures of child abuse or neglect to the designated authorities, which may include a local or state law enforcement agency or the Texas Department of Family Protective Services. For more information about mandatory reporting requirements, see [LSCPA's Policy and Procedure Manual](#).

**Title IX and Sexual
Misconduct**

LSCPA is committed to establishing and maintaining an environment that is free from all forms of sex discrimination, including sexual harassment, sexual violence, and other forms of sexual misconduct. All LSCPA employees, including faculty, have the responsibility to report disclosures of sexual misconduct, including sexual harassment, sexual assault (including rape and acquaintance rape), domestic violence, dating violence, relationship violence, or stalking, to LSCPA's Title IX Coordinator, whose role is to coordinate the college's response to sexual misconduct. For more information about Title IX protections, faculty reporting responsibilities, options for confidential reporting, and the resources available for support visit [LSCPA's Title IX website](#).

**Clery Act Crime
Reporting**

For more information about the Clery Act and crime reporting, see the [Annual Security & Fire Safety Report](#) and the [Campus Security website](#).

**Grievance / Complaint /
Concern**

If you have a grievance, complaint, or concern about this course that has not been resolved through discussion with the Instructor, please consult the Department Chair.

Department Information

Business and Industrial Technology

Chair: [Cristina Lawson](#)

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