# PTAC 2446 Process Troubleshooting PTAC2446-6A1

**CREDIT**

4 Semester Credit Hours (3 hours lecture, 3 hours lab)

**MODE OF INSTRUCTION**

Face to Face

**PREREQUISITE/CO-REQUISITE**:

PTAC 1302, PTAC 1410, MATH 1332 or 1314, PTAC 1332.

**COURSE DESCRIPTION**

Instruction in the different types of troubleshooting techniques, procedures, and methods used to solve process problems.

**COURSE OBJECTIVES**

Upon completion of this course, the student will be able to

1. Collect data and identify techniques for troubleshooting.

2. Utilize applicable troubleshooting methods to solve process problems.

**INSTRUCTOR CONTACT INFORMATION**

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|---|---|
| Instructor: | Marty Day |
| Email: | tday@lit.edu |
| Office Phone: | 409-289-0580 |
| Office Location: | ExxonMobil PATC Building room 212 |
| Office Hours: | Monday/Wednesday 1:00 to 5:00 |

**REQUIRED TEXTBOOK AND MATERIALS**

Instructor will provide handouts and troubleshooting exercises.

**ATTENDANCE POLICY**

1. Missing more than 3 classes will result in an automatic reduction of one letter grade. Every absence thereafter results in a letter grade reduction.

2. Absences are counted for unexcused, excused and coming to class late.

3. Missing more than 20% of a class period will count as an absence.

4. Being tardy 2 times equals 1 absence.

Approved: TMD082024

**DROP POLICY**
If you wish to drop a course, you are responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

**COURSE CALENDAR**

| Modules | TOPIC | READINGS (Due on this Date) | ASSIGNMENTS (Due on this Date) |
|---|---|---|---|
| Jan 21 | Introduction | Syllabus and intro to Troubleshooting | Read Syllabus and Introduction |
| Jan 23 | Process instrumentation | Unit 1 | Read Unit 1 handout |
| Jan 28 | Process controllers | Unit 2 | Read and answer questions on unit 2 |
| Jan 30 | Process Troubleshooting | Unit 3 &4 | Read and answer questions on units 3 & 4 |
| Feb 4 | Process Troubleshooting | Units 5 & 6 | Read units 5 &6 |
| Feb 6 | Distillation System | Unit 14 | Read unit 14 and answer questions |
| Feb 11 | Distillation System | Unit 14 | Troubleshoot Unit 14 |
| Feb 13 | Distillation System | Unit 14 | Simtronics SPM 700 Exercise 3 |
| Feb18 | Distillation System | Unit 14 | Simtronics SPM700-Ex 5 |
| Feb 20 | Furnace System | Unit 13 | Read unit 13 handout |
| Feb 25 | Furnace System | Unit 13 | Troubleshoot Unit 13 |
| Feb 27 | Exam #1 | Exam covering Distillation and Furnace | None |
| March 4 | Cooling Tower System | Unit 11 | Read Unit 11 handout |
| March 6 | Cooling Tower System | Unit 11 | Simtronics Cooling Tower |
| March 18 | Boiler System | Unit 12 | Read Unit 12 |

| March 20 | Exam #2 | Cooling Tower & Boiler | none |
|---|---|---|---|
| March 25 | Compressor System | Unit 9 | Read Unit 9 |
| March 27 | Compressor System | Unit 9 | Troubleshoot Compressor |
| April 1 | Pump System | Unit 8 | Read unit 8 |
| April 3 | Exam #3 | Compressor and Pumps | None |
| April 8 | Hands on training | Distillation Unit | Work in teams to solve unit |
| April 10 | Hands on training | Distillation Unit | Work in teams to solve problem |
| April 15 | Hands on training | Distillation Unit | Work in teams to solve problem |
| April 17 | Hands on training | Distillation Unit | Work in teams to solve problem |
| April 22 | Final Exam | | |

## COURSE EVALUATION

Final grades will be calculated according to the following criteria:

| | |
|---|---|
| Lab assignments | 20% |
| Exercises | 20% |
| Exams | 40% |
| Final Exam | 60% |

## GRADE SCALE

- 90-100    A
- 80-89     B
- 70-79     C
- 60-69     D
- 0-59      F

## TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at https://lit.edu/online-learning/online-learning-minimum-computer-requirements. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

## DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at Special Populations - Lamar Institute of Technology (lit.edu).

## STUDENT CODE OF CONDUCT STATEMENT

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

### Starfish

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

## ADDITIONAL COURSE POLICIES/INFORMATION
Course weekly schedule subject to change based on LIT or Instructor conflicts.

## ARTIFICIAL INTELLIGENCE STATEMENT

**Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI/ChatGPT in their courses**