

**The University of Texas at Tyler**  
**Soules College of Business**  
**Department of Technology**  
**TECH 3312**  
**FACILITIES OPERATIONS & MAINTENANCE**



**Course Syllabus**

Course: TECH 3312  
Title: FACILITIES OPS & MAINTENANCE  
Section: .001  
Semester: **Spring 2026**  
Class Time: Hybrid  
Classroom: COB 162

Instructor: Mrs. RaeJean Griffin  
Office: COB 225.07  
Office Hours:  
Other Availability: By appointment  
Phone Number: 903-566-7211  
Email: rgriffin@uttyler.edu  
(60% Lecture - 40% Lab)

**COURSE LISTING:**

An introduction to the fundamentals of facilities operations and maintenance. The students are provided with lecture and laboratory experiences.

**COURSE DESCRIPTION:** The purpose of this course is to provide students with the fundamental concepts related to preventive maintenance, routine repairs, production monitoring, and corrective operations, including a working knowledge of electrical, pneumatic and hydraulic power systems, lubrication concepts, bearings and couplings, belts and chain drives, machine control systems and devices.

**TEXTBOOKS:**

Ballee, Shawn A., and Gary R. Shearer. *Industrial Maintenance and Mechatronics*. 1st ed., The Goodheart-Willcox Company, Inc., 2020. ISBN:978-1-63563-428-3

**COURSE OBJECTIVES**

- A. Demonstrate a comprehensive knowledge of maintenance operations
- B. Understand basic mechanical systems

**STUDENT LEARNING OUTCOMES**

At the end of this course, students will be able to:

- A. Identify and describe basic mechanical systems on exams and quizzes.
- B. Describe the systems approach to problem analysis and design on exam and quizzes.
- C. Describe the elements of basic control systems and logic on laboratory assignments.
- D. Identify and define the terms as illustrated in laboratory assignments.
- E. Perform specific mathematics operations analysis by earning passing scores on quizzes and assignments.

- F. Identify and describe the common maintenance components by earning passing scores on quizzes and exams.

### **CORE COMPETENCIES**

- A. Computer-Based Skills – the student will complete written assignments using the word processor.
- B. Communication Skills – the student will exhibit a mastery of both written and oral skills in completion and presentation of the assigned projects.
- C. Interpersonal Skills – the student will interact in class discussion to clarify thinking regarding industrial maintenance.
- D. Problem Solving (Critical Thinking) – the student will use conceptual thinking to analyze and finish laboratory activities.
- E. Personal Accountability for Achievement – the student will complete projects at the time designated by the instructor and will enter class discussion.
- F. Competence in Technology Principles
  - a. Competence in major field and grounding in other major technology major core areas – the student will be able to identify components of industrial maintenance through applications.
  - b. Exposure to and appreciation for industrial experiences such as industrial tours, work-study options and cooperative education, senior seminars – Students will use laboratory equipment and complete tests routinely performed in industry.

### **EXPECTATIONS and POLICIES:**

- 1. You have the prerequisite knowledge, skills, and dispositions to participate in this course.
- 2. You will participate in all discussions, activities, and assignments.
- 3. You will complete and submit all assignments on time. (Late assignments will not be accepted, for any reason. Technology related issues are not acceptable excuses, submit early!)
- 4. You will communicate promptly with the instructor concerning any issues related to the course.
- 5. You will adhere to The University of Texas at Tyler academic honest policies.
- 6. You will not ask for “sympathy points.” (i.e. give me an “extra” assignment to increase my grade.)
- 7. The instructor reserves the right to modify this syllabus and will communicate this to the students in a timely manner of the modifications.
- 8. You are required to be present for in person lab days. If a student is more than 5 minutes late without an excuse, it counts as an absence. Three absences is an automatic reduction of a letter grade in the class.
- 9. Absolutely NO Cell Phones
- 10. Students are required to log on and use Canvas Learning Management Software at least once a day to access their electronic gradebook, related course materials and other information that the instructor may post.
- 11. No retakes of quizzes or exams for "technical difficulties or internet interruptions".

## **COURSE REQUIREMENTS:**

### **Assignments**

1. complete assigned work (written & computer)
2. complete midterm exam
3. complete final exam

### **GRADING:**

#### **Course Activities and Grading Weights**

##### Grading and Evaluation:

##### Total Points:

Lab Assignments	400
Quizzes	250
Mid Term	150
Final Exam	150
Total	1000

### **UT Tyler Honor Code**

Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

### **Student Resources:**

*Faculty can update student resources to provide additional support appropriate for each course.*

#### **Resources to assist you in the course**

- [UT Tyler Student Accessibility and Resource \(SAR\) Office](#) (provides needed accommodations to students with document needs related to access and learning)
- [UT Tyler Writing Center](#)
- [The Mathematics Learning Center](#)
- [UT Tyler PASS Tutoring Center](#)
- [UT Tyler Supplemental Instruction](#)
- [Upswing \(24/7 online tutoring\)](#) - covers nearly all undergraduate course areas
- [Knack Tutoring](#) – in-person and virtual options
- [Robert Muntz Library](#) and [Staff/Library Liaisons](#)
- [Canvas 101](#) (learn to use Canvas, proctoring, and other software)
- Digital Support Toolkit (for supported courses only. Students are automatically enrolled in the toolkit for supported courses)

- [The Career Success Center](#)
- [UT Tyler Testing Center](#)
- [Office of Research & Scholarship Design and Data Analysis Lab](#)

### **Resources available to UT Tyler Students**

- [UT Tyler Counseling Center](#) (available to all students)
- [TimelyCare](#) (24/7 access to Student Support Program counseling through phone or chat and online wellness resources available in a variety of languages)
- [Military and Veterans Affairs](#) (supports for our military-affiliated students)
- [UT Tyler Patriot Food Pantry](#)
- [UT Tyler Financial Aid and Scholarships](#)
- [UT Tyler Student Business Services](#) (pay or set up payment plans, etc.)
- [UT Tyler Registrar's Office](#) (academic information, forms library, policies, etc.)
- [Office of International Programs](#)
- [Title IX Reporting](#)
- [Patriots Engage](#) (available to all students. Get engaged at UT Tyler.)

### **University Policies and Information**

#### **Withdrawing from Class**

Students may [withdraw](#) (drop) from this course using the [Withdrawal Portal](#). Withdrawing (dropping) this course can impact your Financial Aid, Scholarships, Veteran Benefits, Exemptions, Waivers, International Student Status, housing, and degree progress. Please speak with your instructors, consider your options, speak with your advisor, and visit the One-Stop Service Center (STE 230) or email [enroll@uttyler.edu](mailto:enroll@uttyler.edu) to get a complete review of your student account and the possible impacts to withdrawing. We want you to make an informed decision. UT Tyler faculty and staff are here for you and often can provide additional support options or assistance. Make sure to carefully [read the implications for withdrawing from a course and the instructions](#) on using the [Withdrawal portal](#)..

Texas law prohibits students from dropping more than six courses during their entire undergraduate career\*. The six courses dropped includes those from other 2-year or 4-year Texas public colleges and universities. Consider the impact withdrawing from this class has on your academic progress and other areas, such as financial implications. We encourage you to consult your advisor(s) and Enrollment Services for additional guidance. **CAUTION #1:** Withdrawing before census day does not mean you get a full refund. Please see the [Tuition and Fee Refund Schedule](#). **CAUTION #2:** All international students must check with the [Office of International Programs](#) before withdrawing. All international students are required to enroll full-time for fall and spring terms. **CAUTION #3:** All UT Tyler Athletes must check with the Athletic Academic Coordinator before withdrawing from a course. **CAUTION #4:** All veterans or military-affiliated students should consult with [Military and Veterans Affairs](#).

\* Students who began college for the first time before 2007 are exempt from this law.

### **Artificial Intelligence Statement**

UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy. Refer to the About This Course section of the UT Tyler Syllabus Module for specific information on appropriate use of AI in your course(s).

### **Final Exam Policy**

Final examinations are administered as scheduled. If unusual circumstances require that special arrangements be made for an individual student or class, the Dean of the appropriate college, after consultation with the faculty member involved, may authorize an exception to the schedule. Faculty members must maintain student final examination papers for a minimum of three months following the examination date.

### **Incomplete Grade Policy**

If a student, because of extenuating circumstances, is unable to complete all of the requirements for a course by the end of the semester, then the instructor may recommend an Incomplete (I) for the course. The "I" may be assigned in place of a grade *only when **all** of the following conditions are met:* (a) the student has been making satisfactory progress in the course; (b) the student is unable to complete all coursework or final exam due to unusual circumstances that are beyond personal control and are acceptable to the instructor, and (c) the student presents these reasons before the time that the final grade roster is due. The semester credit hours for an Incomplete will not be used to calculate the grade point average.

The student and the instructor must submit an Incomplete Form detailing the work required and the time by which the work must be completed to their respective department chair or college dean for approval. The time limit established must not exceed one year. Should the student fail to meet all of the work for the course within the time limit, then the instructor may assign zeros to the unfinished work, compute the course average for the student, and assign the appropriate grade. If a grade has yet to be assigned within one year, then the Incomplete will be changed to an F, or NC. If the course was initially taken under the CR/NC grading basis, this may adversely affect the student's academic standing.

### **Grade Appeal Policy**

Disputes regarding grades must be initiated within sixty (60) days from the date of receiving the final course grade by filing a Grade Appeal Form with the instructor who assigned the grade. A grade appeal should be used when the student thinks the final course grade awarded does not reflect the grades earned on assessments or follow the grading scale as documented in the syllabus. The student should provide the rationale for the grade appeal and attach supporting document about the grades earned. The form should be sent via email to the faculty member who assigned the grade. The faculty member reviews the rationale and supporting documentation and completes the instruction section of the form. The instructor should return the form to the student, even if a grade change is made at this level. If the student is not satisfied with the decision, the student may appeal in writing to the Chairperson of the department from which the grade was issued. In situations where there is an allegation of capricious grading, discrimination, or unlawful actions, appeals may go beyond the Chairperson to the Dean or the Dean's designee of the college from which the grade was issued, with that decision being final. The Grade Appeal form is found in the [Registrar's Form Library](#).

NOTE: The Grade Appeal Form is different from the Application for Appeal form submitted to the Student Appeals Committee, which does not rule on grade disputes as described in this policy.

## **Disability/Accessibility Services**

In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA), the University of Texas at Tyler offers accommodations to students with learning, physical, and/or psychological disabilities. If you have a disability, including a non-visible diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or a history of modifications or accommodations in a previous educational environment, you are encouraged to visit <https://hood.accessiblelearning.com/UTTyler/> and fill out the New Student application. The Student Accessibility and Resources (SAR) office will contact you when your application has been submitted and an appointment with the Assistant Director Student Accessibility and Resources/ADA Coordinator. For more information, including filling out an application for services, please visit the SAR webpage at <https://www.uttyler.edu/disability-services>, the SAR office located in the Robert Muntz Library, LIB 460, email [saroffice@uttyler.edu](mailto:saroffice@uttyler.edu), or call 903.566.7079."

## **Military and Veterans**

UT Tyler honors the service and sacrifices of our military-affiliated and veterans students. If you are a student who is a veteran, on active duty, in the reserves or National Guard, or a military spouse or dependent, please stay in contact with your faculty member if any aspect of your present or prior service or family situation makes it difficult for you to fulfill the requirements of a course or creates disruption in your academic progress. It is important to make your faculty member aware of any complications as far in advance as possible. Your faculty member is willing to work with you and, if needed, put you in contact with university staff who are trained to assist you. The [Military and Veterans Affairs](#) has campus resources for military-affiliated students. The MVSC can be reached at [MVSC@uttyler.edu](mailto:MVSC@uttyler.edu) or via phone at 903.565.5972.

## **Students on an F-1 Visa**

To remain in compliance with Federal Regulations requirements you must do the following:

- Traditional face-to-face classes: Attend classes on the regular meeting days/times.
- Hybrid Classes: Attend all face-to-face classes convened by the instructor according to the schedule set for your specific course.
- Online course: Only one online course can count toward your full-time enrollment. Students are expected to be fully engaged and meet all requirements for the online course.

## **Academic Honesty and Academic Misconduct**

The UT Tyler community comes together to pledge that "Honor and integrity will not allow me to lie, cheat, or steal, nor to accept the actions of those who do." Therefore, we enforce the [Student Conduct and Discipline policy](#) in the Student Manual Of Operating Procedures (Section 8).

## **FERPA**

UT Tyler follows the Family Educational Rights and Privacy Act (FERPA) as noted in [UT Tyler's Policy 7.01: Family Educational Rights and Privacy Act](#). The course instructor will follow all requirements to protect your confidential information.

## **Absence for Official University Events or Activities**

This course follows the practices related to [Excused Absences for University Events or Activities](#) as noted in the Catalog.

## **Absence for Religious Holidays**

This course follows the practices related to UT Tyler's [Excused Absence for Religious Holy Days](#) as noted in the Catalog.

## **Absence for Pregnant Students**

This course follows the requirements of Texas Laws SB 412, SB 459, SB 597/HB 1361 to meet the needs of pregnant and parenting students. Part of the supports afforded pregnant students includes excused absences. Faculty who are informed by a student of needing this support should make a referral to the Parenting Student Liaison. NOTE: Students must work with the Parenting Student Liaison in order to receive these supports. Students should reach out to the Parenting Student Liaison at [parents@uttyler.edu](mailto:parents@uttyler.edu) and also complete the [Pregnant and Parenting Self-Reporting Form](#).

## **Campus Carry**

We respect the right and privacy of students who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at <http://www.uttyler.edu/about/campus-carry/index.php>.

**Note: The instructor reserves the right to modify the syllabus. All modifications will be communicated to the students in a timely manner.**