

McLennan

C O M M U N I T Y

COLLEGE

WACO, TEXAS

COURSE SYLLABUS

AND

INSTRUCTOR PLAN

College Physics I

PHYS - 1401 - 87

Professor Laura Wright

NOTE: This is a 16-week course.

NOTE: This is an Online Course

COVID 19 Notice:

McLennan Community College is committed to providing you with every resource you need to reach your academic goals including your safety. We will continue to monitor the evolving situation with COVID 19 and adjust our safety guidelines to make sure we offer a safe environment for you and our faculty. Please make sure to consult your faculty and the MCC website at <https://www.mclennan.edu/crisis-management/coronavirus-updates/index.html> on any changes to these guidelines.

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Course Description:

Fundamental principles of physics, using algebra and trigonometry; the principles and applications of classical mechanics and thermodynamics, including harmonic motion, mechanical waves and sound, physical systems, Newton's Laws of Motion, and gravitation and other fundamental forces; with emphasis on problem solving. Semester Hours 4 (3 lec/3 lab)

Prerequisites and/or Corequisites:

Prerequisite: MATH 1316, 2412 or 2413 with a grade of C or better.

Course Notes and Instructor Recommendations:

This is a challenging course that will take a considerable time commitment on your part to be successful. You *must* have a reliable internet connection. You *must* be self-motivated to learn. You *must* have a backup plan in the event that your normal technology options fail you. If you were taking this class in person, you would be sitting through lecture for 3 hours each week, plus spending 3 hours each week doing a laboratory assignment, plus about 6 or so more hours *on average* studying and completing homework outside of class, for a total of 12 or so total hours working on physics per week. You can expect the online version of this class to take just as much time, however, you will get the freedom to choose which 12 or so hours each week you will be working on coursework. Assignments will generally be due every Sunday at 11:59pm. The concepts learned each week build upon each other, so if you fall behind, it will be very difficult to get caught back up.

Instructor Information:

Instructor Name: Laura Wright

MCC Email: lwright@mclennan.edu *

Office Phone Number: 254-299-8419

Office Location: HP 230 or Zoom Meeting ID: 837-729-4618

Office/Teacher Conference Hours: TBD please make an appointment here:

<https://booking.appointy.com/ProfWright>

*I respond fastest to email. I am not in my office very often to answer the phone. Please give me 24 hours to respond. I may take longer to respond on the weekends.

Required Text & Materials:

- *Physics*, 5th Edition
James S. Walker
Pearson Addison-Wesley
ISBN: 9780321976444 (textbook only)

ISBN: 9780134019734 (textbook with *Mastering Physics Student Access Kit*)

- *Mastering Physics Student Access Kit*
Pearson Addison-Wesley
ISBN: 9780134019666
(License can be purchased online through www.masteringphysics.com)
- A “scientific” calculator: This means something that can handle exponents, trig functions, and logarithms. Must not have camera or web access (you cannot use your phone for quizzes and tests)
- Reliable access to the internet. Homework assignments can be accessed online through Mastering Physics.
- Access to Brightspace: This course will have a significant component on Brightspace. If you haven’t yet logged into the system, learn how to do so. Log in, and make sure you can access the materials for this course.

MCC Bookstore Website: <http://www.mclennan.edu/bookstore/>

Methods of Teaching and Learning:

Students will learn through watching lecture videos, online homework assignments, laboratory exercises, quizzes, and tests. In addition, students will be required to make an appointment with me to meet with me either in person or via Zoom at least once during the course of the semester.

Course Objectives and/or Competencies:

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

1. Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration. (*Chapters 2&4*)
2. Apply Newton's laws to physical problems including gravity. (*Chapter 5&6*)
3. Solve problems using principles of energy. (*Chapters 7&8*)
4. Use principles of impulse and linear momentum to solve problems. (*Chapter 9*)
5. Solve problems in rotational kinematics and dynamics, including the determination of the location of the center of mass and center of rotation for rigid bodies in motion. (*Chapter 10*)
6. Solve problems involving rotational and linear motion. (*Chapter 10*)
7. Describe the components of a wave and relate those components to mechanical vibrations, sound, and decibel level. (*Chapter 14*)
8. Demonstrate an understanding of equilibrium, including the different types of equilibrium. (*Chapter 11*)
9. Discuss simple harmonic motion and its application to quantitative problems or qualitative questions. (*Chapter 13*)

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10. Solve problems using the principles of heat and thermodynamics. (*Chapters 16, 17, and 18*)
11. Solve basic fluid mechanics problems. (*Chapter 15*)
12. Demonstrate techniques to set up and perform experiments, collect data from those experiments, and formulate conclusions from an experiment. (*Laboratory*)
13. Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports. (*Laboratory*)

Course Outline or Schedule:

You are responsible for everything listed in the detailed calendar below. You should watch the associated videos and read the indicated pages in the textbook on or before the due date for each assignment, so that you have time to complete the assignment. This calendar is subject to change. In the event that I need to make changes to the schedule, I will send an email to the class and make an announcement via Brightspace as soon as I possibly can.

Week	Topic	Textbook	What's due Sunday @ 11:59pm
Week 1 1/10 – 1/16	<ul style="list-style-type: none"> • Orientation • Introduction to Physics 	Ch. 1	<input type="checkbox"/> Orientation Quiz <input type="checkbox"/> HW 1 <input type="checkbox"/> Discussion Board 1
Week 2 1/17 – 1/23	<ul style="list-style-type: none"> • Motion in One Dimension • Kinematic Equations • Free Fall 	Ch. 2	<input type="checkbox"/> HW 2 <input type="checkbox"/> Lab 1 <input type="checkbox"/> Quiz 1 <input type="checkbox"/> Discussion Board 2
Week 3 1/24 – 1/30	<ul style="list-style-type: none"> • Vectors • Motion in Two Dimensions • Projectiles 	Ch. 3 Ch. 4	<input type="checkbox"/> HW 3 <input type="checkbox"/> Lab 2 <input type="checkbox"/> Discussion Board 3
Week 4 1/31 – 2/6	<ul style="list-style-type: none"> • Newton's Laws • Free Body Diagrams • Forces • <i>Formal Meetings with Professor Start</i> 	Ch. 5	<input type="checkbox"/> HW 4 <input type="checkbox"/> Lab 3 <input type="checkbox"/> Quiz 2 <input type="checkbox"/> Discussion Board 4
Week 5 2/7 – 2/13	<ul style="list-style-type: none"> • Frictional Forces • Strings and Springs • Test 1 (Weeks 1-4) 	Ch. 6	<input type="checkbox"/> HW 5 <input type="checkbox"/> Test 1 - take between 2/7 – 2/11
Week 6 2/14 – 2/20	<ul style="list-style-type: none"> • Work and Kinetic Energy • Power • Potential Energy • Conservation of Energy 	Ch. 7 Ch. 8	<input type="checkbox"/> HW 6 <input type="checkbox"/> Lab 4 <input type="checkbox"/> Discussion Board 5

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Week 7 2/21 – 2/27	<ul style="list-style-type: none"> • Linear Momentum • Impulse • Conservation of Momentum • Collisions 	Ch. 9	<input type="checkbox"/> HW 7 <input type="checkbox"/> Lab 5 <input type="checkbox"/> Quiz 3 <input type="checkbox"/> Discussion Board 6
Week 8 2/28 – 3/6	<ul style="list-style-type: none"> • Rotational Kinematics • Center of Mass • Rotational Energy • <i>Last Week for Formal Meeting with Professor</i> 	Ch. 10	<input type="checkbox"/> HW 8 <input type="checkbox"/> Lab 6 <input type="checkbox"/> Discussion Board 7 <i>Assignments this week due March 13 due to Spring Break</i>
<i>Spring Break March 7 - 11</i>			
Week 9 3/14 – 3/20	<ul style="list-style-type: none"> • Rotational Dynamics • Static Equilibrium 	Ch. 11	<input type="checkbox"/> HW 9 <input type="checkbox"/> Lab 7 <input type="checkbox"/> Quiz 4 <input type="checkbox"/> Discussion Board 8
Week 10 3/21 – 3/27	<ul style="list-style-type: none"> • Simple Harmonic Motion • Test 2 (Weeks 5-9) 	Ch. 13	<input type="checkbox"/> HW 10 <input type="checkbox"/> Test 2 - take between 3/21 – 3/25
Week 11 3/28 – 4/3	<ul style="list-style-type: none"> • Waves and Sound • Fluids 	Ch. 14 Ch. 15	<input type="checkbox"/> HW 11 <input type="checkbox"/> Lab 8 <input type="checkbox"/> Discussion Board 9
Week 12 4/4 – 4/10	<ul style="list-style-type: none"> • Temperature and Heat • Methods of Heat Transfer 	Ch. 16	<input type="checkbox"/> HW 12 <input type="checkbox"/> Lab 9 <input type="checkbox"/> Quiz 5 <input type="checkbox"/> Discussion Board 10
Week 13 4/11 – 4/17	<ul style="list-style-type: none"> • Ideal Gases • Phase Equilibrium • Latent Heats • Phase Changes 	Ch. 17	<input type="checkbox"/> HW 13 <input type="checkbox"/> Lab 10 <input type="checkbox"/> Discussion Board 11
Week 14 4/18 – 4/24	<ul style="list-style-type: none"> • Thermodynamics • Heat Engines & Refrigerators 	Ch. 18	<input type="checkbox"/> HW 14 <input type="checkbox"/> Quiz 6 <input type="checkbox"/> Discussion Board 12
Week 15 4/25 – 5/1	Test 3 (Weeks 10-14)		<input type="checkbox"/> Test 3 - take between 4/25 – 4/29
Final Exam will be taken 4/30 – 5/3			

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Course Grading Information:

Category	Percent
Homework	20%
Discussion Boards	5%
Professor Meeting	5%
Quizzes	10%
Labs	20%
Tests (3 Regular averaged together)	25%
Final Exam	15%
Total	100%

A: 90%+ B: 80% – 89% C: 70% – 79% D: 60% – 69% F: 0% – 59%

Orientation Quiz: Before you can access any other assignments for the course, you must complete an orientation quiz. The orientation quiz is designed to make sure you understand the policies of this course. You will have unlimited attempts, but you must score an 100% to receive credit for any other assignment in the course. This quiz will not be for a grade, nor will there be a due date, but please don't wait to complete it, or you will fall behind on your subsequent assignments.

Homework (20%): Homework will be completed through Mastering Physics. It is due each week. If you are having trouble with the homework, do not wait until the last minute to get help. It is your responsibility to come to my office hours and get help if you need it. There will be a 5% penalty for each day that a homework assignment is late. This is to encourage you not to fall behind, while also allowing flexibility for unforeseen circumstances. The lowest homework grade will be dropped at the end of the semester.

Discussion Boards (5%): each week, you will need to complete a discussion board assignment. You will be given a prompt and expected to answer thoughtfully. You may also respond to other student's posts, as long as the discussion is thoughtful and civil. Discussion board questions may be over a certain topic, or a reflection on what you have learned that week. There will be no credit given for late discussion board assignments, for any reason.

Formal Meeting with Professor (5%): You will be required to attend a meeting with the professor at least once during the course. You will have the option to either meet face-to-face in the professor's office or over Zoom. Your formal meeting must occur sometime between January 31 and March 4. Please plan for the meeting to take 30 minutes.

Quizzes (10%): Throughout the semester, there will be 6 quizzes given. Dates for quizzes are given in the calendar above. You can take the quiz at any time within the week they are given. Quizzes are open note and open book. You will have two attempts to complete each quiz, and they will be timed, 30 minutes for each attempt.

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Lab Activities (20%): You will need to complete a lab activity each week. All of the labs will be completed online. They will mostly be in the form of simulations designed to enhance your understanding of each week's lessons. Instructions for each lab will be given through Brightspace. Please see late policy below if you are unable to complete the lab activity by the due date. The lowest lab grade will be dropped at the end of the semester.

Tests (25%): There will be three tests throughout the course of this semester. The tests will be taken in the date ranges listed in the schedule above. More information on testing software and procedures will be given online. Please see late policy below if you are unable to complete the test in the date range given. No tests will be dropped.

Final Exam (15%): The final exam will be comprehensive. It will be in the same format as the regular semester tests. You will need to take it in the date range listed on the calendar above. Please see late policy below if you are unable to complete the final exam in the date range given.

Extra Credit Opportunities: Throughout out the semester, I may offer extra credit activities. I will post them on Brightspace as they arise.

Academic Dishonesty: Any student that is found guilty of academic dishonesty such as cheating, plagiarism, or collusion, will receive the zero grade on every test or assignment involved. For repeated violations, a guilty student can be assigned a failing grade in this course and can be recommended for suspension from the McLennan Community College District.

Late Work, Attendance, and Make Up Work Policies:

You will receive a 5% penalty for each day a homework assignment is late, regardless of the reason it is late. Discussion board assignments, quizzes, labs, and tests will **not** be accepted late, for any reason.

According to MCC policy, you will be dropped from the course if you miss 25% of class if the 25% course time missed is BEFORE the drop date and receive a grade of W. Since this is an online course, attendance will be based upon participation in the course. Students should have activity in the course (homework, test, discussion board, lab). I will run a report each week on Sundays to determine who is participating in the class. Any week in which work is not logged will count as an absence. You will be dropped after four weeks of inactivity (25% of class time). Attendance will be logged in Brightspace, and students are encouraged to regularly check Brightspace for accuracy.

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However, if 25% of course time missed is not reached until AFTER the drop date, you will not be withdrawn from the course, however you will receive a grade of F for the course and any work you turn in after this will not be graded.

MCC allows for “excused” absences caused by (1) authorized participation in official College functions, (2) personal illness, (3) an illness or a death in the immediate family, or (4) the observance of a religious holy day. It is your responsibility to let me know the reason for an absence as soon as you are able and provide sufficient documentation (doctor’s note, email from coach, etc.).

If you are unable to complete a test, the final exam, quiz, or lab activity within the date ranges given in the calendar above, please contact me as soon as possible. If you are able to provide documentation for the MCC excused absence reasons listed above, I will make other arrangements for you to complete the test, final, quiz, or lab activity.

The MCC excused absence policy also includes any children you have that may become sick. If you have to miss a due date because you are caring for your sick child, please provide a doctor’s note as soon as you are able, so that I can make other arrangements for you to complete your work.

If you are called to active military duty that requires an extended absence, please contact me, so that we can determine the best options for you moving forward in this course.

If you wish to drop this class, for any reason, you must email me from your MCC student account before 5 pm on the last day for student-initiated drops, with the request “Please drop me from COURSE ID and SECTION NUMBER.” If the email does not come from your student account, or if the request is verbal, I cannot drop you. Alternatively, there is a form you can fill out and have me sign before 5 pm on the last day for student-initiated drops. (Make an appointment to ensure I am on campus to provide the signature). After submitting your request, you must verify the drop was processed, notifying me in writing within 48 hours of your original request if it was not. Otherwise, you will stay on the roster for the rest of the semester and be awarded the grade earned. Drops past the drop date are only done in documented, extreme, life-crisis circumstances, which usually involve withdrawing from school entirely.

Student Behavioral Expectations or Conduct Policy:

Students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance, and an attitude that seeks to take full advantage of the education opportunity.

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[Click Here for the MCC Attendance/Absences Policy](https://www.mclennan.edu/highlander-guide/policies.html)

(<https://www.mclennan.edu/highlander-guide/policies.html>)

Click on the link above for the college policies on attendance and absences. Your instructor may have additional guidelines specific to this course.

******I reserve the right to change any term on this syllabus at any time during this semester******

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C O M M U N I T Y

COLLEGE

ACADEMIC RESOURCES/POLICIES

Accommodations/ADA Statement:

Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. For additional information, please visit www.mclennan.edu/disability.

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

disabilities@mclennan.edu

254-299-8122

Room 319, Student Services Center

Title IX:

We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the Title IX Coordinator at titleix@mclennan.edu or by calling Dr. Drew Canham (Chief of Staff for Diversity, Equity & Inclusion/Title IX) at (254) 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or the MCC Student Counseling Center at MCC at (254) 299-8210. The MCC Student Counseling Center is a confidential resource for students. Any student or employee may report sexual harassment anonymously by visiting <http://www.lighthouse-services.com/mclennan/>.

Go to McLennan's Title IX webpage at www.mclennan.edu/titleix/. It contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence, or domestic violence.

Student Support/Resources:

MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at <http://www.mclennan.edu/campus-resource-guide/>

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources or want to explore strategies for balancing life and school, we encourage you to contact a Success Coach by calling (254) 299-8226 or emailing SuccessCoach@mclennan.edu. Students may visit the Completion Center Monday-Friday from 8 a.m.-5 p.m. to schedule a meeting with a Success Coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff based on household size. Text (254) 870-7573 to schedule a pantry appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

MCC Foundation Emergency Grant Fund:

Unanticipated expenses, such as car repairs, medical bills, housing, or job loss can affect us all. Should an unexpected expense arise, the MCC Foundation has an emergency grant fund that may be able to assist you. Please go to <https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html> to find out more about the emergency grant. The application can be found at https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf.

MCC Academic Integrity Statement:

Go to www.mclennan.edu/academic-integrity for information about academic integrity, dishonesty, and cheating.

Minimum System Requirements to Utilize MCC's D2L|Brightspace:

Go to <https://www.mclennan.edu/center-for-teaching-and-learning/Faculty-and-Staff-Commons/requirements.html> for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

Minimum Technical Skills:

Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology:

In the event MCC's technology systems are down, you will be notified via your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

Email Policy:

McLennan Community College would like to remind you of the policy (<http://www.mclennan.edu/employees/policy-manual/docs/E-XXXI-B.pdf>) regarding college email. All students, faculty, and staff are encouraged to use their McLennan email addresses when conducting college business.

A student's McLennan email address is the preferred email address that college employees should use for official college information or business. Students are expected to read and, if needed, respond in a timely manner to college emails.

Instructional Uses of Email:

Faculty members can determine classroom use of email or electronic communications. Faculty should expect and encourage students to check the college email on a regular basis. Faculty should inform students in the course syllabus if another communication method is to be used and of any special or unusual expectations for electronic communications.

If a faculty member prefers not to communicate by email with their students, it should be reflected in the course syllabus and information should be provided for the preferred form of communication.

Email on Mobile Devices:

The College recommends that you set up your mobile device to receive McLennan emails. If you need assistance with set-up, you may email Helpdesk@mclennan.edu for help.

Forwarding Emails:

You may forward emails that come to your McLennan address to alternate email addresses; however, the College will not be held responsible for emails forwarded to an alternate address that may be lost or placed in junk or spam filters.

Disclaimer:

The resources and policies listed above are merely for informational purposes and are subject to change without notice or obligation. The College reserves the right to change policies and other requirements in compliance with State and Federal laws. The provisions of this document do not constitute a contract.