



WACO, TEXAS

**COURSE SYLLABUS
AND
INSTRUCTOR PLAN**

College Physics II

PHYS – 1402

Dr. Yang Liu

NOTE: This is a 4-week course.

NOTE: This is an online course.

Course Description:

Fundamental principles of physics, using algebra and trigonometry; the principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, optics, and modern physics topics; with emphasis on problem solving.

Prerequisites and/or Corequisites:

Prerequisite: PHYS 1401 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: Dr. Yang Liu

MCC Email: Yang_Liu1@baylor.edu, yliu@mclennan.edu

Office Phone Number: 254-749-9848

Office Location: Not available

Office Hours: To be decided

*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. Solve problems involving the inter-relationship of fundamental charged particles, and electrical forces, fields, and currents. (*Chapters 19, 20, 21*)
2. Apply Kirchhoff's Rules to analysis of circuits with potential sources, capacitance, inductance, and resistance, including parallel and series capacitance and resistance. (*Chapter 21*)
3. Solve problems in the electrostatic interaction of point charges through the application of Coulomb's Law. (*Chapters 19, 20*)
4. Solve problems involving the effects of magnetic fields on moving charges or currents, and the relationship of magnetic fields to the currents which produce them. (*Chapter 22*)
5. Use Faraday's and Lenz's laws to determine electromotive forces and solve problems involving electromagnetic induction. (*Chapter 23*)
6. Articulate the principles of reflection, refraction, diffraction, interference, and superposition of waves. (*Chapters 25, 26, 28*)
7. Describe the characteristics of light and the electromagnetic spectrum. (*Chapter 25*)
8. Develop techniques to set up and perform experiments, collect data from those experiments, and formulate conclusions from an experiment. (*Laboratory*)
9. Demonstrate the collection, analysis, and reporting of data using the scientific method. (*Laboratory*)

10. Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports. (*Laboratory*)
11. Solve problems applying the principles of reflection, refraction, diffraction, interference, and superposition of waves. (*Chapters 14, 25, 26, 28*)
12. Solve practical problems involving optics, lenses, mirrors, and optical instruments. (*Chapters 26, 27*)

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 assignments. This calendar is subject to change. If I need to make changes to the schedule, I will send an email to the class or make an announcement via Brightspace as soon as I possibly can.

Due Date	Chapter Covered	Homework Due
7/10	13	Introduction to Mastering Physics, Physics Primer
7/11	14	HW13
7/12		HW14
7/13	19	Lab1
7/14	20	HW19
7/15		HW20
7/17		Lab2
7/18	Exam 1 (Covers chapters 13,14,19,20)	
7/19	21	Lab3
7/20	22	HW21
7/21		HW22
7/22	23	Lab4
7/24	24	HW23

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7/25	25	HW24
7/26		HW25
7/27		Lab 5, Lab6
7/28	Exam 2 (Covers Chapters 21-25)	
7/31	26	HW26
8/1	27	HW27
8/2	28	HW28
8/3		Lab7
8/4	Exam 3 (Covers Chapters 26-28)	
8/5		Lab8
8/7	Final Exam (Comprehensive)	

Course Grading Information:

Category	Percent
Homework	24%
Labs	10%
Tests (3 Regular averaged together)	30%
Final Exam	36%
Total	100%

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

Homework: Homework assignments are involved numeric problems designed to challenge you to gain a deeper understanding of the course material. Homework will be turned in and graded utilizing Mastering Physics. Due dates for all the homework are given on the the calendar.

Lab: The lab exercises will be posted online, which will consist of graphical analysis, simulations or numerical analysis based on basic physics concepts. Due dates for all the labs are given on the calendar.

Exams: There will be three major exams during the summer session to be completed online. Exam questions will be based on material covered in the lecture notes, the textbook and the laboratory exercises. Final Exam: The final exam will be comprehensive and has the same format as the other exams. Check the dates for exam on the calendar.

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:

Attendance: Attendance for this course will be based on weekly participation in the course. In order to be considered “Present” in a given week, you must complete at least one assignment for that week. Weeks in which no assignments were completed will count as an absence.

Excused Absence Policy: MCC allows for “excused” absences caused by (1) authorized participation in official College functions, (2) personal illness (this also includes if you have to care for a sick child), (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 the day you return to campus and provide sufficient documentation (doctor’s note, email from coach, etc.).

Late Work Policy: For homework assignments only, you will receive a 5% penalty for each day a homework assignment is late, regardless of the reason it is late. Quizzes, discussion boards, tests, and lab assignments will not be accepted late, for any reason. If you miss any assignment on the dates listed in the calendar above due to an MCC excused absence reason, you must contact me as soon as possible (before any applicable due dates, if possible) and provide acceptable documentation as listed above for your absence so that I can make arrangements for you to make up the affected assignment(s). Absences without documentation or for reasons that do not fall under the above will not be considered for makeup and you will receive a zero for each affected assignment.

Drop Policy (student-requested): The last date for student-initiated withdrawals from this course is **Tuesday, March 23 before 5pm**. If you wish to withdraw from this course to receive a grade of “W,” you must send me an email from your MCC student account stating, very clearly,

“Please withdraw me from PHYS-1402-87.” If your language is vague, or if the request comes from any form of communication other than your MCC student email account, I cannot drop you. Once you are dropped, it is very difficult to reinstate you, so please make sure you are certain you wish to drop before making the request. Any drop requests received after 5pm on March 23 will only be done in extreme, life-changing circumstances that usually involve withdrawing from MCC entirely.

Drop Policy (due to absences): According to MCC policy, you are not eligible to receive credit for the course if you miss 25% of class time, which for this course, is 4 weeks’ worth of absences (consecutive or non-consecutive).

- *If the 4 absences occur on or before the drop date of March 23, you will be automatically withdrawn from the course and receive a grade of “W.”*
- *If the 4th absence occurs after March 23, you will not be withdrawn. However, you will receive an automatic grade of “F” for the course, and no assignments submitted after the date of the 4th absence will be graded.*

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.

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

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

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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-
2998122
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 acting Title IX Coordinator at titleix@mclennan.edu or by calling, Dr. Claudette Jackson, (Diversity, Equity & Inclusion/Title IX) at (254) 299-8465. MCC employees are mandatory reporters and must report incidents immediately to the Title IX Coordinator. Individuals may also contact the MCC Police Department at (254) 299-8911 or the MCC Student Counseling Center 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/>

Academic Support and Tutoring is here to help students with all their course-related needs. Specializing in one-on-one tutoring, developing study skills, and effectively writing essays. Academic Support and Tutoring can be found in the Library and main floor of the Learning Commons. This service is available to students in person or through Zoom from 7:30 am - 6:00 pm Monday through Thursday and 7:30 am - 5:00 pm on Friday. You can contact the Academic Support and Tutoring team via Zoom (<https://mclennan.zoom.us/j/2542998500>) or email (ast@mclennan.edu) during the above mentioned times.

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 either MCC CREW – Campus Resources Education Web by calling (254) 299-8561 or by emailing crew@mclennan.edu or a Success Coach by calling (254) 299-8226 or emailing SuccessCoach@mclennan.edu. Both are located in the Completion Center located on the second floor of the Student Services Center (SSC) which is open Monday-Friday from 8 a.m.-5 p.m.

Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff. To schedule an appointment, go to https://mclennan.co1.qualtrics.com/jfe/form/SV_07byXd7eB8iTqJg. Both the Completion Center and Paulanne's 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/FacultyandStaffCommons/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. For more information about your student email account, go to www.mclennan.edu/studentemail.

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.

You can find help on the McLennan website about connecting your McLennan email account to your mobile device:

- [Email Setup for iPhones and iPads](#)
- [Email Setup for Androids](#)

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.

For more helpful information about technology at MCC, go to [MCC's Tech Support Cheat Sheet](#) or email helpdesk@mclennan.edu.

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.