COURSE SYLLABUS
AND
INSTRUCTOR PLAN

College Physics
PHYS-1401-03

Dr. Meera D Gurung

NOTE: This is a Blended/Hybrid 16-week course.

COVID 19 Notice:
McLennan Community College is committed to providing you with every resource you need to reach your academic goals. We are also concerned for your safety. We are working through COVID-19 guidelines to make sure we offer a safe environment for you and our faculty. This will include smaller class sizes to manage social distancing and proper cleaning techniques. You will have the advantage of a physical classroom experience but may also need to work part of the time online as we adjust to limited classroom capacity. This will also allow us the flexibility to move online if so directed by federal, state and/or local COVID 19 guidelines. Faculty and staff are preparing now to ensure that you have the best experience in the midst of these uncertain times.
**Course Description:**
Algebra-level physics sequence, with laboratories, that includes study of wave mechanics, optics, electricity, magnetism, and radioactivity.

**Prerequisites and/or Corequisites:**
Prerequisite: Credit for MATH 1316 or equivalent.

**Course Notes and Instructor Recommendations:**
PHYS-1401-03 is a blended course which involves in person class and zoom meetings to assist the student with the course content. Class notes and lecture videos will be available in Brightspace to assist student success, all assignments will be posted on Mastering Physics.

**Instructor Information:**
Instructor Name: Dr. Meera Devi Gurung  
MCC E-mail: mgurung@mclennan.edu  
Office Phone Number: 254-299-8186  
Office Location: S345  
Office/Teacher Conference Hours: TTH 10:00 am: 1:00 pm via zoom  
Other Instruction Information: I usually reply the email within 24 hrs, if you don’t hear back from me in 24 hr, email me back.

**Required Text & Materials:**
- Title: Physics 5th Edition  
  Author: James S. Walker  
  Edition: 5th  
  Publisher: Pearson Addison-Wesley  
  ISBN: 9780321976444 (textbook only)

  Access to PHYSICS (MODIFIED MASTERINGPHYSICS STANDALONE ACCESS CARD)  
  Publisher: Pearson Addison-Wesley  
  ISBN: 9780134019727  
  (License can be purchased online through www.masteringphysics.com)
• **A Scientific Calculator**: This means something that can handle exponential, trigonometric, hyperbolic trigonometric, and logarithmic functions.

• **Access to Brightspace**: It is used for announcement, grades, and other course-related materials.

• **Additional requirements**: Students must have a reliable computer and internet connection. Students must be able to demonstrate basic computer literacy skills such as keyboarding, sending and receiving email, and using a web browser.

**MCC Bookstore Website**: [http://www.mclennan.edu/bookstore/](http://www.mclennan.edu/bookstore/)

**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/](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, we encourage you to contact a success coach by calling (254) 299-8226. Students can visit the Completion Center Monday-Friday from 8:00 a.m.-5:00 p.m. to meet with a success coach and receive additional resources and support to help reach academic and personal goals. Paulanne’s Pantry (MCC’s food pantry) is open 12:00 p.m.-1:00 p.m., Monday-Friday, without an 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](https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html) to find out more about the emergency grant. The application can be found [here](https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf).

**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 contacted/notified through 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.

* Click Here for the Minimum System Requirements to Utilize MCC’s D2L|Brightspace *(https://www.mclennan.edu/center-for-teaching-and-learning/Faculty%20and%20Staff%20Commons/requirements.html)*

Click on the link above for information on the minimum system requirements needed to reliably access your courses in MCC’s D2L|Brightspace learning management system.

**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 her/his 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.

**Forwarding Emails:**
You may forward the 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 become lost or placed in junk or spam filters.
Methods of Teaching and Learning:

The course offered is a blended class. We do meet in person on campus for few lectures and most of the lectures is via Zoom. Registered students gain access to a Brightspace that contains all course materials, instructions, assignments and Zoom meeting informations. Students will learn through in person classes, online lectures, as well as through work on homework, labs, and, exams. Additional methods may be used as opportunities present themselves.

Course Objectives and/or Competencies:

1. Perform operations and solve problems using dimensional analysis.
2. Identify the principles of kinematics, and solve problems using these principles.
3. Describe vectors, and solve problems using vectors in Physics.
5. Identify the different types of energy, and solve problems using principles of conservation of energy.
6. Define the principles of impulse, momentum, and collisions, and use those principles to solve problems.
7. Discuss rotational kinematics and dynamics and the relationship between linear and rotational motion.
8. Solve problems involving rotational and linear motion.
9. Define equilibrium, including different types of equilibrium.
10. Describe and apply the basic principles of fluid mechanics.
11. Discuss and apply the principles of temperature and heat in thermodynamics.
12. Prepare laboratory reports that clearly communicate experimental information in a logical and scientific manner.
13. Analyse principles involving classical mechanics.
14. Relate physical observations and measurements involving classical mechanics to theoretical principles.
15. Evaluate the accuracy of physical measurements and the potential sources of error in the measurements.
16. Identify appropriate sources of information for conducting laboratory experiments involving classical mechanics.
CORE OBJECTIVES – LIFE AND PHYSICAL SCIENCES: Courses in this category focus on describing, explaining, and predicting natural phenomena using the scientific method. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

A. Critical Thinking Skills - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information. These will be assessed through lecture exams, problems assigned for homework, and/or laboratory exercises.

B. Communication Skills - to include effective development, interpretation and expression of ideas through oral and visual communication via Zoom meetings. These will be assessed by presentations and/or reports based on laboratories, problems, and/or research.

C. Empirical and Quantitative Skills - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions. These will be assessed through lecture exams, problems assigned for homework, and/or laboratory exercises.

Teamwork - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal. This will be evaluated through group discussions, group laboratory projects, and/or through group presentations

**Course Outline or Schedule:**

This course will encompass the following material to be divided into three sections. Objectives 12-16 are covered under labs which will be now assigned online. Core objectives are covered throughout the semester.

Chapter 1 – Introduction to Physics
Chapter 2 – One-Dimensional Kinematics
Chapter 3 – Vectors in Physics
Chapter 4 – Two-Dimensional Kinematics
Chapter 5 – Newton’s Laws of Motion
Chapter 6 – Applications of Newton’s Laws
Chapter 7 – Work and Kinetic Energy
Chapter 8 – Potential Energy and Conservation of Energy
Chapter 9 – Linear Momentum and Collisions
Chapter 10 – Rotational Kinematics and Energy
Chapter 11 – Rotational Dynamics and Static Equilibrium
Chapter 12 – Gravity
Chapter 15 – Fluids
Chapter 16 – Temperature and Heat
Chapter 17 – Phases and Phase Changes
Chapter 18 – The Laws of Thermodynamics

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**Course Grading Information:**
Homework: 35%     Lab: 10%
Exams (3): 40%     Final Exam: 15%

**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.

**Lab:** The lab exercises will be posted online, which will consist of graphical analysis, simulations or numerical analysis based on basic physics concepts.

**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.
Late Work, Attendance, and Make Up Work Policies:

**Homework and Lab:** Students lose 2% credit per hour for problems completed after the due date and time on Mastering Physics.

**Exams:** Unless there is a college approved, documented, excused absence, no major exam may be made up. Any unexcused absence for an exam will result in a grade of zero for that exam.

**Final Exams:** The final exam is required for all students. Unless there is a college approved, documented, excused absence, the final exam may be made up. Any unexcused absence for final exam will result in a grade of zero for that exam.

Attendance Policy for the online course. Your Success in this course depends on your active participation and engagement throughout the course, you are required to complete all assignments (homework, labs, three tests and a final test) by the due date. You are expected to attend 75% of in person classes and 50% of zoom class. If you don’t log on and review your course for contiguous 3 days it will be marked absent for that week, and if you miss due dates for Three of the assignments, it will count towards 25% of absence in your attendance then you will be informed and you might be dropped from the class as well.

**Tardiness:** Any student who is late in submitting the online assignment will accumulate half an absence, regardless for the reason for the tardiness. These half absences will count towards your absence in attendance.

**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 Academic Integrity Statement
  (www.mclennan.edu/academic-integrity)
The link above will provide you with information about academic integrity, dishonesty, and cheating.

* Click Here for the MCC Attendance/Absences Policy
  (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 guidelines specific to this course.
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. Instructors should not provide accommodations unless approved by the Accommodations Coordinator. For additional information, please visit 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

* Click Here for more information about Title IX
(www.mclennan.edu/titleix)
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 (Vice President for Student Success) at 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or the MCC Student Counseling Center at MCC by calling 299-8210. The MCC Student Counseling Center is a confidential resource for students. Any student or employee may report sexual harassment anonymously by visiting the following website: http://www.lighthouse-services.com/mclennan/.

McLennan’s Title IX webpage (http://www.mclennan.edu/titleix/) 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.

I reserve the right to change any term on this syllabus at any time during the semester
* You will need to access each link separately through your Web browser (for example: Internet Explorer, Mozilla, Chrome, or Safari) to print each link’s information.