

SYLLABUS

PH 211 Physics I

Instructor: Dr. W C. Mahone **Class Meeting Location/Time:**

Class Location: FLW 220

Lab:

Office Location: FLW 214

Phone: 254-3740 **E-mail:** wmahone@mvsu.edu

Class times: MWF 08:00 to 08:50 & 10:00-10:50, **Lab:** R 8:00 to 10:40 & 1:00 to 3:40 pm

Office Hours: MW, 9:00-10:00 & 02:00 to 03:00, T 1:00 to 4:00pm F 9:00-10:00 & 2:00-4:00

Text: Serway & Vuille Latest Ed.

COURSE DESCRIPTION

Physics 211 is a general non-calculus physics designed to develop an understanding of fundamental concepts that are a part of many upper level follow-up science courses. In this course the focus is on force, motion work and energy. We will start out with physical quantities, units and measurements. Then move on to rectilinear motion. Then after a review of vector operations we will proceed to Newton's Laws of force and motion. We will then apply these laws to the study of projectile and rotational motion. From there we will move on to the concept of work and energy. We will conclude the semester with a study of momentum and Collisions.

PREREQUISITES

Algebra and Trig.

PURPOSE

Employing Mississippi Valley State University's Holistic Transfer Model (HTM), PH 211 contributes to education and training of Holistic Transformers; that is, those may be considered to be scholars who continually strive to integrate all knowledge into a single world view. These students become life-long learners who build upon accrued knowledge and understanding. They also become facilitators who stimulate the natural curiosity of others particular public school students. In doing so, PH 211 develops the skills and scientific background required of teachers of students in public schools as well as professionals in the scientific work place.

Student Learning Outcomes

The following general course goals are established to meet the purposes of PH 211:

1. Develop a basic understanding of force and motion and how it relates to various aspects of existence.
2. Develop an understanding of the difference between quantities and units.
3. Learn the basics of solving word problems.
4. Learn to perform measurements, collect and interpret data.
5. Learn to write coherent reports about an experiment that is effective communication.
6. Develop critical thinking skills, in particular the ability to analyze information, formulate hypotheses and draw conclusions based on data.
7. Clarify the significance of replicated, standards or controls, measurements, data reduction and presentation analysis, and accuracy in reporting of the scientific activities.
8. Apply the Scientific Method.

CONTENT

Textbook

“College Physics” by Serway and Faughn 10th ed. Or latest

Laboratory Experiments

(1) Analysis of Pythagoras theorem & General Triangle relationships(physical measurements), (2) Motion Analysis Experiment (3) Rectilinear motion I with Constant Acceleration (3) Force analysis of an incline plane (Static Friction) , (4) Projectile motion (5) Hanging Tension Force Analysis.

USE OF TECHNOLOGY

Becoming a holistic transformer is facilitated by the use of technology. Scholarship and reflective thinking promoted by easy access to information that may include widely varying theories and knowledge bases related to an extensive array of scientific and educationally related subjects. The same is, of course, true for developing the habits of life-long learner and classroom facilitator. Therefore, the use of technology in various forms will be encouraged in preparing for classroom discussion, scientific inquiry, practical application exercises, and lesson-plan development. Such technology will include, though not be limited to

1. Computerized library searches for information using scientific and educational databases
2. Use of internet to perform in depth searches for information related to appropriate instructional methodology and materials for teaching students in science; and
3. Computer applications useful in instruction and in scientific applications (e.g., simulations, data and word processing).

EVALUATION AND GRADING PROCEDURES

Grading Components

Class Tests	45 points
Mid-semester Exam.	5 points
Final Exam.	15 points
Laboratory grading	15 points
Quizzes/Group Tests	15 points
Home work	5 points
Total	100 points

Grading Scale	A	90-100%
	B	80-89%
	C	60-79%
	D	50-59%
	F	<50%

Special Policies:

Attendance : 1 letter grade for every two unexcused absences.

Tardiness: 1 letter grade for every four tardies.

Cell Phones: To be turned **off** at all times during class. If phone goes off during a test, student may be asked to leave the classroom with no possibility to make up work. Any student who leaves the room to answer a cell will be asked not to return to class.

Un-signed Work: Any work turned in but not signed will receive a zero with no makeup possibility.

Classroom behavior: Negative classroom behavior will not be tolerated and can result in student being asked to leave the class.

- **Bring book and Calculator to Class!!!** Will keep official record!

Excessive Restroom breaks: Loss of Bonus points

Leaving class early without prior notification of instructor: Count as absence

Restroom break during test: Take up test and give makeup.

Copying: Automatic "F" for the semester

STUDENTS WITH SPECIAL NEEDS

Students having any special needs (i.e., disabilities, problems, or any factors that may affect their performance in class) or requiring special instructional strategies should make these special needs known to the instructor during the first week of the course. The instructor will meet with the student to insure access to resources in the University and make appropriate instructional modifications as required..

Note: This document does not constitute a contract, but a set of guidelines subject to change.