

Course Number: PHYSICS 2425A
Course Title: Physics I
Course Director: **James Tison, Ph.D.**
Office Hours: T, Th 1-2PM

Trimester Credit Hours: 4
Total Contact Hours Per Trimester: 120
Lab Hours Per Week: 4

COURSE DESCRIPTION: Physics is the most basic of the sciences. It deals with behavior and structure of matter. Physics I will deal with measurements and uncertainties, one and two-dimensional motion, vectors and graphical analysis, Newton's Laws of Motion, projectiles, frictional, gravitational and centripetal forces, concepts of work, energy and momentum, and conditions of equilibrium.

The student will meet for lecture 8 hours per week for 7-1/2 weeks and 4 hours each week for laboratory

GENERAL APPROACH TO TEACHING:

Physics concepts will be presented and relevant mathematical formulations developed with a strong emphasis on problem solving. Participatory involvement in the problem solving is encouraged.

ESTIMATE OF STUDENT WORKLOAD:

A minimum of 8-12 hours per week out of class study is recommended for a student to achieve a grade of B.

LEARNING OUTCOMES:

Upon completion of the Physics II lecture and Labs the student should be able to:

1. Understand the main concepts of physics regarding the laws of motion in one and two dimensions.
2. Apply the laws of motion, work, energy and momentum to solve theoretical and practical problems.
3. Gain understanding of how the laws of motion, work, energy and momentum apply to other fields of study.
4. Learn how to perform laboratory experiment and apply deductive analysis in order to verify the main principles of physics.

ASSESSMENT:

Four exams (72%), Lab Report/Quizzes (28%).

Exams (equal weighting: 18%): Three regular exams + final

Labs (cumulative weighting: 28%): Five lab reports (Refer to Rubric) + 5 Quizzes

PREREQUISITES: College Algebra and Trigonometry (co-requisite minimum)

REQUIRED TEXTBOOKS: Physics: Principle and Applications: 6th edition by Douglas Giancoli

RECOMMENDED ADDITIONAL TEXTBOOKS: None

SUPPLIES: Scientific Calculator

GRADING SYSTEM:

Evaluation is an integral part of the educational process and is used as an educational tool to help students identify problem areas, to recognize and reward achievement, and to identify students who are unable to meet the rigors of the curriculum. Final course grades and their interpretation are listed below:

Grade	Numerical Value	Grade Point Average	Interpretation of Academic Achievement
A	89.5 – 100	4.0	Excellent
B	79.5 – 89.49	3.0	Above Average
C	69.5 – 79.49	2.0	Satisfactory
F	69.49 or below	0.0	Unacceptable

This grading system is strictly adhered to. There are NO exceptions.

LABS: Six Laboratory Experiments will be performed and a group laboratory report will be produced.

OPEN LABS: N/A

90/90 RULE: N/A

A complete listing of all Academic policies is found on the MyParker Website/Academic Home Page/Common Policies:

- Absences for Religious Holidays
- Academic Dishonesty
- Academic Promotion, Probation and Dismissal Policy
- Appeals
- Assistance and Accommodations
- Attendance Policy
- Audio/Video Taping
- Cell Phones and Electronic Devices in Class
- Classroom Behavior
- Communications
- Computer Usage
- Examinations (Make up Exams/Lab Practicals)
- Altering Grades on Exams
- Exam Review
- Final Examinations
- Grading System
- Late Instructors to Lecture/Lab
- Missed Exam Policy
- Professional Decorum
- Special Needs Consideration
- Student Bereavement Policy 3
- Excused Absences

DISCLAIMER

The lecture outlines contained in the lecture booklet are NOT intended to represent the entire content of the course. A lecture outline is intended to be a guide to the lecture. The responsibility of the instructor is to follow the outline, expand the concepts and give explanation and illustrations to clarify content. The role of the student is to attend lecture and take notes over material presented by the lecturer that explains and illustrates the material listed in the outline. It is also the responsibility of the student to question the instructor if explanations and illustrations are not clearly presented or understood.

The instructors take no responsibility for the accuracy or completeness of old notes, quiz questions or exam questions that students may purchase, acquire from off of the internet or be given by previous students.

IMPORTANT NOTE:

The provisions contained in this syllabus do not constitute a binding contract between the student and the Parker University. These provisions may be changed at any time and for any reason at the discretion of the Course Director. When it is necessary to make changes to this document, appropriate notice (at least one week, if at all possible) will be