

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

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

Lab Hours Per Week: 4
Lab Contact Hours/Trimester: 60

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 dimensional motion including velocity and acceleration; vectors; Newton's laws of motion; projectile motion; friction and inclines, circular motion and centripetal acceleration; Newton's Law of Gravitation; force and work; potential and kinetic energy and conservation of energy; linear and angular momentum; equilibrium and elasticity.

The student will meet for lecture 8 hours per week for 7½ 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 and applications. Participatory involvement in the problem solving is encouraged.

ESTIMATE OF STUDENT WORKLOAD:

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

LEARNING OUTCOMES:

1. Student will gain knowledge and understanding of the principles and laws of physics as they apply to velocity, force, momentum, energy, and work.
2. Student will learn to apply concepts to solve theoretical problems and explain phenomena in the laboratory and the outside world.
3. Gain an understanding and appreciation of how other fields of study incorporate the precepts of physics
4. Student will learn to perform laboratory experiments that illustrate important concepts
5. Student will learn how to apply various experimental and mathematical methodologies for presenting data and results.
6. Development of skills for analytical thinking that will be useful for problem solving in other fields;

ASSESSMENT:

The four exams will consist of conceptual and quantitative multiple choice questions. Each problem has a value of 5 points. Partial credit (1-4 pts) will be given based on work shown for each problem.

Laboratory reports will be graded for 10 key characteristics of a fully developed written report and analysis that should be self-descriptive to a 3rd party reviewer.

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 scale is strictly adhered to. There are NO exceptions.

Four exams will be given equally weighted and worth 72% of final grade. Laboratory Reports (cumulative) are 18% and homework assignments 10% of the final grade.

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

OPEN LABS: N/A

90/90 RULE:

This course offers the student the benefits of a 90/90 policy. It is designed to reward the diligent student with an end of the course bonus provided they meet the qualifications of the policy. A student who has a 90 or better average in this course (for all exams, lab practicals and lab quizzes) and who has attended class 90% or more of the class meetings, including labs, will have the option of being exempted from taking the final exam. A student wishing to be exempt from the final exam must submit this request in writing in person to the course director by the Thursday of the last day of regular classes. Permission to be exempt from the final exam will be given on a case by case basis and will be given at the time of presentation of the written request.

EXTRA CREDIT: Extra credit is not given

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 Practical)
 - 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

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 given to the student(s).