

Instructor:

Dr. Xiaojuan (Judy) Fan
Office: Science Building 256
Phone: (304) 696-3757
E-mail: fan2@marshall.edu
Office Hrs: MF 2-4 PM W2-3 PM or by appointment.

Textbook:

“University Physics with Modern Physics” by Young and Freedman, 13th Ed.

Concurrent:

MTH 229 and PHY 202.

Course Description:

This is a course in basic principles of physics for physics, mathematics, and engineering majors with 4-hour credit lecture class. The course is an introduction to the topics: vectors, motion, velocity, acceleration, motion diagram, the laws of motion, forces of friction, work, kinetic energy, potential energy, energy conservation, momentum and impulse, collisions, rotational motion, torque, and other physical properties of matters including states of matters, thermodynamics, vibrations and waves if time permits. There might be a few omissions due to unexpected conditions. This course will help students to understand and learn various physical concepts by what students will be able to develop skills in solving problems that require lots of practice.

Learning Outcomes:

This course is the first half of a one-year introductory course “general physics” that uses the mathematical tools from algebra, trigonometry, solid geometry, calculus, and vectors. It is designed for students having their main interest or majoring in Biology, Chemistry, (Pre) Medicine, Architecture, Technology, the Earth and Environmental Sciences, Engineering, etc.

At the end of this course the student should be able to apply physics knowledge to solving problems in motion and motion laws, energy conservation, and rotational motion, fundamental concepts on states of matters, vibration and wave properties, etc.

How to Study:

1. Maintain a positive attitude throughout the course, keeping in mind that physics is the most fundamental of all natural sciences.
2. Assign at least 10-hours/week-study time (these must be quality hours).
3. Do the homework independently and use the instructor's office hours for help.
4. Do not cram before exams and be prepared when you attend the exams.
5. Be an active listener in class. Ask questions when the subject is not clear.
6. You learn more by doing more. When solving a problem try on your own without help first, then get help if you cannot solve it.
7. Physics study is very intensive that you need to keep yourself up in the pace of the class and always tightly follow up with the instructor.

Attendance & Grading Policy:

Attendance will be kept tracking in each class at the instructor's discretion. Leaving in the middle of class is subject to be absent. You are responsible to sign your initial at each class. Six or more unexcused absences will result in a reduction of your final grade by one letter grade. You will be

responsible for what is said in class and examinations must be taken on the scheduled dates unless a valid excused absence* such as sickness, etc., occurs. Please let the instructor know ahead of time if you will have to be absent in exams and schedule a make-up upon a valid reason*. In the event that an absence is justified, a missed exam score will be added to the final exam score, thus the final exam total points would be 35% at least. The dean will be notified of any period of absence of six lecture hours in a row.

* An excused absence or valid reason generally requires a written excuse from another source (physician, school, police, etc.). Unexcused absence will course zero credit for attendance and exams.

Homework assignments:

Homework will be assigned on at the end of each chapter. Homework assignments should be handed in the following week class. Usually, one week time is given to finish about 10 problems from one chapter. 2 or 3 out of 10 problems are randomly picked up for grading due to lack of enough teaching assistant graders. Each homework assignment will be worth 10 points. **Late hand-in homework may receive up to 2 points off.** Copy homework will be given zero point.

Grading:

Your semester grade will consist of the following components:

Attendance	10%
Homework	20%
Pop-up quizzes	20%
Midterm examination	25%
Final examination	<u>25%</u>
Total	100%

Pop-up quizzes usually take 15-20 minutes working on 1 or 2 problems at the beginning of class that would probably not be announced in advance. Quiz questions will be similar to homework questions or some problems we talk in class. Dates for midterm and final examinations follow the school's regular schedule. The two examination formats will be no more than 10 multiple-choice questions plus 4 to 5 comprehensive problems covering 5 or 6 chapters (in general). Exam review session is offered upon request in a class just before the exam.

Straight forward multiple choice problems	30%
Comprehensive problems	70%

When doing problems either multiple choices or comprehensive problems, please show your solutions work in detail in order to get partial credits no matter your final answer is correct or wrong. Your test grading will mainly base on the logic of the solution. Final answers only for comprehensive problems will not be assigned for full credits.

You are allowed to bring one page of equation sheet to two-hour midterm and final exams but not to pop-up quizzes. No programmable calculator will be allowed while taking any exams. Make an arrangement before taking the exam to have a simple calculator or doing simple calculations.

Grading Scale for Spring Session:

90 ≤ A,
80 ≤ B ≤ 89,
70 ≤ C ≤ 79,
60 ≤ D ≤ 69,
F < 60

Policy for Students with Disabilities: Marshall University is committed to equal opportunity in education for all students, including those with physical, learning and psychological disabilities. University policy states that it is the responsibility of students with disabilities to contact the Office of Disabled Student Services (DSS) in Prichard Hall 117, phone 304 696-2271 to provide documentation of their disability. Following this, the DSS Coordinator will send a letter to each of the student's instructors outlining the academic accommodation he/she will need to ensure equality in classroom experiences, outside assignment, testing and grading. The instructor and student will meet to discuss how the accommodation(s) requested will be provided. For more information, please visit <http://www.marshall.edu/disabled> or contact Disabled Student Services Office at Prichard Hall 11, phone 304-696-2271.

Cell phones, pagers, and other electronic communication devices should be turned off during class time. This is especially true on exam days.