

# Physics 2021 - General Physics I

## Spring 2015

**Instructor:**

Dr. Y. Ha

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Office hours: Monday, Wednesday, Friday 11:00 - 12:00 a.m.

**Lectures:**

Lectures will take place according to the official time and room. It will be most helpful if you know which topic is going to be covered in class. This will help you understand the concepts and examples as they are discussed.

**Textbook:** Physics for Scientists & Engineers with Modern Physics and Mastering Physics, 4th edition, Volume 1, by Giancoli, Pearson Publishing 2009. ISBN 9780136139232

**Attendance:**

You are required to attend all lectures, recitations and lab sections. Lectures and exams are given by the course instructor. You must register for a lab section independently. Recitation section is given by a recitation instructor. Homework and lab work will be considered as part of the grade. If you miss any class or work there must be a very strong reason. It is your responsibility to complete all the course material.

**Exams:**

Exams must be taken by all students together at the same time. Makeup exam is only allowed by prior written notice.

Grades will be determined as follows:

Midterm Exam 1, 25%, in February

Midterm Exam 2, 25%, in March

Final Exam, 25%, during final exam week

Homework and Lab work, 25%

**Course Goal:**

Physics 2021 is intended primarily for biology majors, but open to others. Topics include mechanics, gravitation, energy conservation, fluids and waves. Students must know both differential and integral Calculus proficiently.

**Calculator:**

A scientific calculator is required. Programmable type not allowed in exam.

## Topics for Physics 2021

Textbook: Physics for Scientists & Engineers, Volume 1, 4th edition by Giancoli 2009

All regular sections are required for the following chapters.

Sections with asterisk \* are not required.

Chapter 2: Describing Motion: Kinematics in One Dimension

Chapter 3: Kinematics in Two or Three Dimensions; Vectors

Chapter 4: Dynamics: Newton's Laws of Motion

Chapter 5: Using Newton's Laws: Friction, Circular Motion, Drag Forces

### **Exam 1**

Chapter 6: Gravitation and Newton's Synthesis

Chapter 7: Work and Energy

Chapter 8: Conservation of Energy

Chapter 9: Linear Momentum

### **Exam 2**

Chapter 13: Fluids

Chapter 14: Oscillations

Chapter 15: Wave Motion

Chapter 16: Sound

### **Final Exam**