

**COLORADO STATE UNIVERSITY
DEPARTMENT OF PHYSICS**

**PH 314 – Introduction to Modern Physics
Spring Semester 2018
Course Syllabus**

Instructor: Prof. Norm Buchanan
Office: Engineering D119
Phone: 491-6192
Email: Norm.Buchanan@colostate.edu

Textbook: Modern Physics 3rd Ed., Kenneth Krane

Lectures: Monday, Wednesday, Friday 11:00-11:50 PM – ENG B101
Tuesday 11:00-11:50 PM – ENG B101

Office Hours: 1:00 – 2:00 PM Wednesday *starting the second week of the semester, or by appointment.*

Prerequisites: MATH 261 (can be taken concurrently and PH 142)

Schedule:

Exam 1:	Wed., Feb. 21, 2018	5:00-6:50 PM	TBD
Exam 2:	Wed., Mar. 28, 2018	5:00-6:50 PM	TBD
Exam 3:	Wed., May 9, 2018	4:10-6:10 PM	ENG B101

Grading:

Homework	20%
Midterm #1	20%
Midterm #2	20%
Quizzes	10%
Final Exam	30%

Letter Grades:

A+ >95%, A 90-95%, A- 85-89.9%, B+ 80-84.9%, B 75-79.9%, B- 70-74.9%,
C+ 65-69.9% , C 60-64.9%, D 50-59.9%, F < 50%
I reserve the right to lower the threshold for any grade range.

Course Description:

This course will provide an introduction to modern physics for students of physics and related fields. Topics covered will include:

- **Special Theory of Relativity**
- **Introduction to Quantum Mechanics**
- **Atomic Models**
- **Statistical Physics**
- **Solid State Physics**
- **Nuclear and Particle Physics**
- **Other topics as Time Permits**

Homework:

There will be 10 problem sets assigned throughout the term. I reserve the right to have only selected homework problems graded. If this situation arises the problems that are graded will be determined randomly.

Assignments are due **at the start of class** on the due date. Late assignments will in general not be accepted.

It is understood, and expected, that discussion between students will occur as they work on assignments. This is not something I want to discourage. However, when a student writes up their assignment it must be the work of that individual only. Cheating on assignments, or any other work, will not be tolerated and will be dealt with swiftly and harshly.

Attendance:

Attendance is expected and while role call will not be taken, electronically or otherwise, being present for the lectures will greatly benefit the student.

The Tuesday class will usually be used as a time to work on problems, which will be given during that class period. I will be present to assist with the problems. There may be occasions where this class period will be used for additional lectures.

Class Canvas Site:

Assignments will be posted on Canvas after they are announced in class. Solutions will be posted after the problem sets are collected. Course grades will also be posted on Canvas. You are welcome to email me with questions at any time.

Time Commitments and Preparation Expectations:

Students should expect to spend at least three hours outside of class for every hour in class reviewing lecture materials, reading, and homework assignments.

Examinations:

Exams will cover materials presented/discussed in the class lectures, from the textbook, and homework assignments. There will be two equally weighted midterm exams and a final exam given. The final exam will be cumulative with a slight emphasis on the material covered after the second midterm exam.

Calculators are allowed. **Laptop computers, cell phones, or any other electronic devices are not allowed.** Exams will be closed book with a formula sheet permitted – I will cover the details in class.

If you have any conflicts with the examinations, please bring these to my attention as soon as possible.

Cheating:

Important – Read the following carefully

Unfortunately, over the past several years the solutions to textbooks and assigned work of all forms has become readily available through online sites on the internet (Chegg,

Quizlet, etc...) and use of these sites has become prevalent. I am aware of the sites as well as what material is available online and will inform my grader to watch for signs of published solutions when grading submitted work. **Cheating in any form will not be tolerated. Cheating on either homework or any other aspect of the course will result in a failing grade for the course and may lead to further disciplinary action.**

Academic Integrity and Honor Pledge:

This course will adhere to the Academic Integrity Policy of the Colorado State University General Catalog and the Student Conduct Code.

On the first page of any material you submit for grading in this course, you have the opportunity to write the following honor pledge:

I have not given, received, or used any unauthorized assistance in completing this problem set/exam.

Your signature after this pledge is a positive affirmation that you have abided by the Academic Integrity Policy given in this syllabus, in the Colorado State University General Catalog, and in the Student Conduct Code.

The Academic Integrity Policy of the Colorado State University General Catalog may be found on page 7 at the following web site:

<http://www.catalog.colostate.edu/FrontPDF/1.6POLICIES1112f.pdf>.

The Colorado State University Student Conduct Code can be found at:

<http://www.conflictresolution.colostate.edu/conduct-code>.

Cheating, plagiarism, or copying will result in a grade of zero on the assignment or exam in question and may lead to further disciplinary action including but not limited to a failing grade in the course.