



# **CSUC Spring Term 2020**

## **Physics 204A sections 6, 7, 8**

Louis Buchholtz  
Chico, California  
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Dear Class,

I write to you with the firm determination to see you reach your goals both professionally and in life. It is with great confidence (and a certain wry humor) that I must ask you, then, to join me in a creative undertaking designed to make that happen. Our class will continue on-line for the rest of the semester, and indeed I am being asked to refrain from so much as setting foot on campus. So, in this we are equal!

In this letter I'll try to outline what I have in mind for the course. I hope you can experience all this, at least in part, as an historic challenge such as our predecessors also met and mastered. I know that my own parents (and perhaps your grandparents) encountered the great depression, the dust-bowl, World War II, the polio epidemic and other massive exterior events on top of the personal challenges of their own individual lives. They persevered and emerged tougher and more capable than ever. They were chastened ... but had become resilient, steady and wise. This is what I wish for you too. Besides, you'll have important stories and lessons to pass on to your various families in time to come. I promise you! If there is any sadness here, it is that I will likely not meet most of you in person again. I deeply regret this! At about mid-semester, I generally come to know many of my students in a much more personal way – and, indeed, this was happening this time too. With any luck, we can make good use of video conferencing for our problem sessions – and I will at least see you electronically. I hope I can remain as an academic resource in the future for your unlimited use. Please consider that an open offer! Let's begin.



## I. Each Week:

- 1) Each week I will post the readings and the problem set to accompany it on our usual class web site. These problems will **NOT** be for submission as they were - but constitute, nonetheless, the level we must be at. As well, I will post my (handwritten) solutions to the (hard) problems at the end of the week.  
<https://physics.csuchico.edu/buchholtz/4A/>
- 2) I will also post an outline of the lectures I would have given in class – with commentary for you to study. I’ll try to point out features that you should understand in addition to the book’s presentation.
- 3) I’m attempting, as well, to produce video of me (!) explaining the essentials of the chapter. Please bear with me as I master the technology (off-site !).
- 4) I will be asking you to complete one or more “Portfolio Problems” each week. These problems are the equivalent of the classic college “two-page-paper” ... only for us they are technical problems. You may hand-write or type them. These exercises will be longer than what you are used to and more free form. I want to see how you apply the material we are learning. You will up-load these as native pdf files or as scanned pdf/jpg files to our **Blackboard** site. *These Portfolio Problems will form the central content for which I will assign your class grade. The exact manner of assigning grades is yet to be finalized. Please stay tuned.*
- 5) Labs. The week starting March 23 will have no lab. For the following weeks I will post a lab exercise for you to watch and evaluate. If at all possible, I will construct the lab exercise into a second Portfolio Problem for the week.

## II. What’s New:

We will be making use of our regular web-site *and* the standard University **Blackboard** site for our class. Blackboard is where you will submit all your work. The Blackboard reference to the entire class (all three sections) is [202-PHYS204A-05-4569](https://blackboard.csuchico.edu/202-PHYS204A-05-4569) .

I’m hoping to set up Zoom video conferencing problem sessions. Please stay tuned. The reference to our session will be Meeting ID: 662 007 0137

You may join the meeting using :

<https://csuchico.zoom.us/j/6620070137>

To do this you will need to download the Zoom app to your favorite platform.

## III. Feed-back:

- 6) All constructive feed-back is warmly welcomed! Email me at:  
[lbuchholtz@csuchico.edu](mailto:lbuchholtz@csuchico.edu)

**CSUC, Department of Physics Spring Term 2020**

**PHYSICS 204A : MECHANICS**

Lab Sections: **6 - 8**

**Instructor:** Louis Buchholtz    Office: PHSC 101    Ph: 3418 (o) / 6259 (dept)    [lbuchholtz@csuchico.edu](mailto:lbuchholtz@csuchico.edu)  
(our class web site)    <http://Physics.csuchico.edu/buchholtz/>

**Text:** PHYSICS, *Randall D. Knight* 4th edition

**204A sections 06 - 08**

**TENTATIVE *REVISED* SYLLABUS**

<u>WEEK</u>	<u>DATE</u>	<u>CHAPTER / TOPIC</u>	<u>LAB</u>
9	3/23	9 Kinetic energy & Work	no lab
10	3/30	10 Potential Energy	Work-Energy Thm.
11	4/6	11 Momentum and Center of Mass	Impulse and Momentum
12	4/13	12 Rotation, Moment of Inertia, Torque	Conservation in Collisions
13	4/20	12 Rolling, Angular Momentum, Equilibrium	Moment of Inertia
14	4/27	15 Oscillations	Static Equilibrium
15	5/4	13 Gravitation	Simple Pendulums/ Springs and Masses
16	5/11	Summary	Ballistic Pendulum