

# PHYS 201-L Introductory Physics I LAB

Fall 2019 (tentative)

## CATALOG DESCRIPTION: PHYS 201-L Introductory Physics I LAB

Laboratory to accompany [PHYS 201](#). Corequisite: enrollment in PHYS 201.

**TEXT:** Lab experiment instructions in pdf form are available below under Schedule of Labs section. We encourage students to bring their laptops or tablets to lab. PC's will be available for those who do not have laptops or tablets .

**INSTRUCTORS:** Dr. Johnny B. Holmes  
Dr. John Varriano,  
Dr. Suja Kochat

## PREREQUISITES BY TOPIC:

1. Basic algebra, trigonometry

## GOALS:

This laboratory course supplements the lecture course, so it is designed to assist you in reaching the goals of Phys 201. The additional goals of this course are:

1. To provide a hands-on experience with some of the properties of mechanics studied in PHYS 201.
2. To test the models developed in Phys 201 in the real-world environment of the laboratory, and to see how well the models work and to find their limitations.
3. To acquaint the student with lab techniques.
4. To show the limitations of experimental verification of scientific theories.

## EXPERIMENTS:

1. Composition of Concurrent Forces
2. Acceleration Due to Gravity  
Computer program to help with write-up is on [this page](#)
3. Acceleration along an Inclined Ramp
4. Newton's Second Law
5. Centripetal Force
6. Moments of Parallel Forces (Torque)
7. Atwood's Machine
8. Hooke's Law and Potential Energy
9. Fluids
10. Oscillations
11. The Vibrating String

**GRADING:** **see the instructor's syllabus**  
[syllabus for Dr. Holmes](#)

## SCHEDULE FOR LABS:

	W-F	Aug. 21-23	<i>none</i>
1	W-F	Aug. 28-30	<a href="#"><u>Composition of Concurrent Forces</u></a>
2	W-F	Sept. 4-6	* <a href="#"><u>Acceleration Due to Gravity</u></a> (1 <sup>st</sup> write up) Computer help on writing up Acceleration Due to Gravity experiment: is on <a href="#"><u>this page</u></a>
3	W-F	Sept. 11-13	<a href="#"><u>Acceleration Along an Inclined Ramp</u></a>
4	W-F	Sept. 18-20	* <a href="#"><u>Newton's Second Law</u></a> - Parts 1-4 (part of 2 <sup>nd</sup> write up)
5	W-F	Sep 25-27	* <a href="#"><u>Newton's Second Law</u></a> – Parts 5-6 (part of 2 <sup>nd</sup> write up)
6	W-F	Oct. 2-4	<a href="#"><u>Centripetal Force</u></a>
7	W-F	Oct. 9-11	<a href="#"><u>Moments of Parallel Forces (Torque)</u></a>
	W-F	Oct. 16-18	<i>none- Fall Break</i>
8	W-F	Oct. 23-25	* <a href="#"><u>Atwood's Machine</u></a> (3 <sup>rd</sup> write up)
9	W-F	O30-N1	<a href="#"><u>Hooke's Law and Potential Energy</u></a>
10	W-F	Nov. 6-8	<a href="#"><u>Fluids</u></a>
11	W-F	Nov. 12-15	<a href="#"><u>Oscillations</u></a>
12	W-F	Nov 20-22	<a href="#"><u>The Vibrating String</u></a>
	W-F	Nov. 27-29	<i>None- Thanksgiving</i>
	W-F	Dec. 4-6	<i>Make-ups</i>

WRITTEN LAB REPORT GUIDE: *There is a **sample lab report** at the end of the first lab experiment (Composition of Concurrent Forces) guide.*

[Return to Dr. Holmes' home page](#)