

**4:30 PM Lecture Section**

**Instructor:** Dr. Austin Carter

**Office:** Physics Research Building (PRB) – Room 2184

**Phone:** (614) 292-3704 (office)

**Email:** carter.616@osu.edu (best method to contact me)

**Office Hours:** Tuesdays 4:15-5:15 PM and Thursdays 8:30-9:30 AM

**Text (required):** Fundamentals of Physics. Halliday, Resnick and Walker (Wiley).  
Extended 8/E, Binder Ready Version with WebAssign.  
ISBN: 978-0-4704-3956-4

**Laboratory Manual (required):** Physics 132 Laboratory Activities and Worksheets.  
3rd Edition. ISBN: 978-0-7380-3709-7

**Course Websites:** <http://www.physics.ohio-state.edu/~phys132> (general information)  
<https://carmen.osu.edu> (posted grades)  
<https://www.webassign.net/osu/student.html> (online homework)

**Grades:** Recitation/Lab 15%  
Homework 15%  
Quizzes 20%  
Midterm 20%  
Final 30%

**Reading Assignments:** Reading assignments are listed on the syllabus. Complete the readings prior to each lecture.

**Homework (online):** Complete homeworks online at the WebAssign website above. Homework are due at 11:59 PM on Wednesdays unless announced otherwise. Information about WebAssign can be found in the handout labeled “On-Line Homework Instructions for Physics 131, 132 and 133”. Technical questions pertaining to WebAssign should be directed to the WebAssign Manager, Dr. K. Bolland (bolland.1@osu.edu).

**Laboratory:** The labs are held Wednesday through Friday. There is no lab the first week. The laboratory consists of a combination of hands-on work and group problem-solving activities. Read over the laboratory material before attending each lab. The lowest scoring lab is dropped. There will be a **bonus of 0.5%** added to the course total for attending all of the labs.

**Recitations:** The Tuesday recitation period will serve as an unstructured question time with your recitation instructor. Quizzes will be given during the Thursday recitation period. The focus of the recitation sessions will be to provide help in solving homework and quiz problems.

**Quizzes:** There are eight quizzes and the lowest quiz grade is dropped. Quizzes will be given during the Thursday recitations. The quizzes will be based on the most recent homework set---generally due the previous day---and on the material covered in reading

assignments, lectures, and the labs pertaining to that homework. Students are allowed to refer to the homework from the previous week during the quiz. That means a print-off of the WebAssign homework and/or the relevant hand-written work for those problems. This material should be loose-leaf (stapled or paper clipped) and not in a binder or book. A non-programmable calculator will be necessary for the quizzes. No other electronic devices are permitted.

**Exams:** The **MIDTERM** will be given on **Thursday, February 9**, during your recitation period. The **FINAL EXAM** for the 4:30 lecture section will be **Tuesday, March 13 at 5:30 PM**. Details about the midterm and final will be posted on the course website. Both exams will be closed book---no notes will be allowed---but an equation sheets will be provided. A non-programmable calculator will be necessary for the exams. No other electronic devices are permitted. Be sure to bring your student photo-ID.

**Missed Quizzes, Exams, or Labs:** There are no make-up quizzes, exams, or labs. Missed quizzes, exams, or labs may be excused, but only with the permission of the course manager, Dr. M. Ziegler (Smith Lab. Room 1036A, 292-2067, [ziegler.2@osu.edu](mailto:ziegler.2@osu.edu)). He will require documentation to show that your absence was unavoidable. See the General Information sheet for Physics 131-132-133, which contains all of the procedures required for the course.

**This 10-week schedule is a guide, actual lecture topics may vary**  
**The FINAL EXAM for the 4:30 lecture section will be Tuesday, March 13 at 5:30 PM**

## WEEK #1

Reading: Chap. 21: Sect. 1-6

No Homework

**No Lab**

JAN	2 M		<b>No Lecture – Break</b>
	3 T	Rec.	*First day of class
	4 W	Lect.	Electric charge
	5 R	Rec.	
	6 F	Lect.	Coulomb's Law

## WEEK #2

Reading: Chap. 22: Sect. 1-8

**HW 1** – Due January 11

Lab 1: Electric Force &amp; Electric Charge

JAN	9 M	Lect.	Electric fields
	10 T	Rec.	
	11 W	Lect.	Charge distributions I
	12 R	Rec.	<b>QUIZ 1</b>
	13 F	Lect.	Charge distributions II

## WEEK #3

Reading: Chap. 23: Sect. 1-6

**HW 2** – Due January 18**NO LAB**

JAN	16 M		<b>No Lecture – MLK</b>
	17 T	Rec.	
	18 W	Lect.	Electric flux
	19 R	Rec.	<b>QUIZ 2</b>
	20 F*	Lect.	Gauss' Law

**\*Last day to drop without taking a "W"**

## WEEK #4

Reading: Ch. 23:S7-9 / Ch. 24:S1-7

**HW 3** – Due January 25

Lab 2: Electric Field &amp; Electric Flux

JAN	23 M	Lect.	Applying Gauss' Law
	24 T	Rec.	
	25 W	Lect.	Electric potential
	26 R	Rec.	<b>QUIZ 3</b>
	27 F	Lect.	Calculating electric potential

## WEEK #5

Reading: C24:S8-12/C25:S1-6/C26:S1-3

**HW 4** – Due February 1

Lab 3: Electric Potential

JAN	30 M	Lect.	Potentials and Conductors
	31 T	Rec.	
FEB	1 W	Lect.	Capacitors
	2 R	Rec.	<b>QUIZ 4</b>
	3 F	Lect.	Current

## WEEK #6

Reading: Ch. 26:S4-7 / Ch. 27:S1-4

**HW 5** – Due February 8

Lab 4: Capacitors &amp; Energy

FEB	6 M	Lect.	Resistance - Ohm's Law
	7 T	Rec.	
	8 W	Lect.	REVIEW
	9 R	Rec.	<b>MIDTERM</b>
	10 F	Lect.	Single-loop circuits

## WEEK #7

Reading: Ch. 27:S5-9 / Ch. 28:S1-3

**HW 6** – Due February 15

Lab 5: Electrical Resistance

FEB	13 M	Lect.	Multi-loop circuits
	14 T	Rec.	
	15 W	Lect.	RC circuits
	16 R	Rec.	<b>QUIZ 5</b>
	17 F	Lect.	Magnetic Fields

## WEEK #8

Reading: Ch. 28:S3,6,8,9 / Ch. 29:S1-2

**HW 7** – Due February 22

Lab 6: Electric Circuits I &amp; II

FEB	20 M	Lect.	Magnetic Forces
	21 T	Rec.	
	22 W	Lect.	Magnetic Forces (examples)
	23 R	Rec.	<b>QUIZ 6</b>
	24 F	Lect.	Generating Magnetic Fields

## WEEK #9

Reading: Ch. 29:S2-5 / Ch. 30:S1-4

**HW 8** – Due February 29

Lab 7: Magnetism I

FEB	27 M	Lect.	Biot-Savart Law
	28 T	Rec.	
	29 W	Lect.	Ampere's Law
MAR	1 R	Rec.	<b>QUIZ 7</b>
	2 F	Lect.	Faraday's Law

## WEEK #10

Reading: Ch. 30: Sect. 1-4, 7, 8, 9-12

**HW 9** – Due March 7

Lab 8: Magnetism II

MAR	5 M	Lect.	Applying Faraday's Law
	6 T	Rec.	
	7 W	Lect.	Inductance
	8 R	Rec.	<b>QUIZ 8</b>
	9 F	Lect.	Mutual Inductance