

**REQUIRED TEXTS & MATERIALS**

Physics by Cutnell & Johnson, Vols. 1 & 2, 7th ed.

Worksheets for Physics 112 Laboratory, 14th ed. (2008)

Webassign-Plus Access Card (includes electronic version of textbook).

**LECTURER:** Prof. T. Y. Ling, 3142 PRB, 292-7537, [Ling.3@osu.edu](mailto:Ling.3@osu.edu)

**COURSE SUPERVISOR:** Dr. M. Rallis, 1036B Smith Lab, 292-4464, [rallis.1@osu.edu](mailto:rallis.1@osu.edu)

**WebAssign ADMINISTRATOR:** Dr. K. Bolland, 5059 Smith Lab, 292-8065, [bolland.1@osu.edu](mailto:bolland.1@osu.edu)

**COURSE WEBSITE:** <http://www.physics.ohio-state.edu/~phys112>

All reading, problem, and question assignments listed below refer to the Cutnell & Johnson textbook.

Students are expected to complete the assigned reading before lecture, and to attempt the assigned questions and online problems before recitation. Homework and Pre-labs are submitted on-line via

WebAssign: <https://www.webassign.net/osu/student.html>. See the On-Line Homework Instruction sheet for login instructions. See the "Welcome to Students of Physics 112" packet for course policies.

Abbreviations: L = lecture, R = recitation, SAT = Self-Assessment Test (on Cutnell & Johnson website).

**First week - NO LAB**

- Mar. 24 R Intro and Ch 4 P69; Ch 6 P44  
 25 L *Electric Charge and Force* (Read Ch. 18 S1-5; SAT 18.1)  
 26 R Ch. 18 Q3,4,6,8; demonstration problem  
 27 L *Electric Field* (Read Ch 18 S6-8,10,11)  
 28 **ONLINE HOMEWORK #0** DUE AT 11:30 pm: Make sure that you can log into WebAssign successfully (see instructions about login). Complete WebAssign Tutorial (HW0)

**Second week - LAB 1: Electric Force & Electric Charge**

- Mar. 31 R Ch. 18 Q 10,11,13; demonstration problem  
**ONLINE PRELAB #1 due at 5:00 PM**  
 Apr. 1 L *Electric Field and Electric Potential* (Read Ch.18 S6-8,10,11; Ch 19 S1-2)  
**ONLINE HOMEWORK #1** due at 11:30 PM (Ch 18: P3,10,17,22,31,33,34,40,55)  
 2 R **QUIZ 1**; group work  
 3 L *Electric Potential* (Read Ch. 19 S1-4)

**Third week - NO LAB**

- Apr. 7 R Ch 19 Q 1,6,15; demonstration problem  
 8 L *Capacitors, Batteries, and Current* (Read Ch 19 S4,5,7 page 566; SAT 19.2; Ch 20 S1)  
**ONLINE HOMEWORK #2** due at 11:30 PM (Ch 19: P2,3,4,18,30,49,50,54,56)  
 9 R **QUIZ 2**; group work  
 10 L *Current, Resistance, Power* (Read Ch 20 S1-4)  
 11 **Last Day to drop without a "W"**

**Fourth week - LAB 3: Ohm's Law**

- Apr. 14 R Ch 19 Q 17; Ch 20 Q4,5; demonstration problem  
**ONLINE PRELAB #3 due at 5:00 PM**  
 15 L *Circuits* (Read Ch 20 S6-9, page 597; SAT 20.1)  
**ONLINE HOMEWORK #3** due at 11:30 PM (Ch19: P36,38,41,42; Ch 20: P4,11,13,23,25,100)  
 16 R **QUIZ 3**; group work  
 17 L *Circuits, begin Magnetic Field* (Read Ch. 21 S1-3)

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Fifth week -		<b>LAB 4: Circuits</b>
Apr.	21	R CH 20 Q10, 13, Ch 21 Q 2,3; demonstration problem <b>ONLINE PRELAB #4 due at 5:00 PM</b>
	22	L <i>Magnetic Force and Applications</i> (Read Ch. 21 S3-5; SAT 21.1) <b>ONLINE HOMEWORK #4</b> due at 11:30 PM (Ch 20: P41,44,48,58,61,62,64,108; Ch 21: P2,3)
	23	R <b>MIDTERM</b> (Ch. 18,19,20) in recitation room
	24	L <i>Magnetic Torque and Applications</i> (Read Ch. 21 S6,10)

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Sixth week -		<b>LAB 5: Magnetic Forces</b>
Apr.	28	R Ch 21 Q 5,7,8,9; demonstration problem <b>ONLINE PRELAB #5 due at 5:00 PM</b>
	29	L <i>Magnetic Fields from Currents</i> (Read Ch. 21 S7,9; SAT 21.2) <b>ONLINE HOMEWORK #5</b> due at 11:30 PM (Ch 21: P4,10,14,26,28,29,35,36,38,66)
	30	R <b>QUIZ 4</b> ; group work
May	1	L <i>Magnetic Materials/ Intro to Induction</i> (Read Ch. 22 S1-5; SAT 22.1)

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Seventh week -		<b>LAB 6: Magnetic Fields</b>
May	5	R Ch 21 Q 13,17,19, Ch 22 Q 4; demonstration problem <b>ONLINE PRELAB #6 due at 5:00 PM</b>
	6	L <i>Induction and Faraday's Law</i> (Read Ch. 22 S6,7) <b>ONLINE HOMEWORK #6</b> due at 11:30 PM (CH 21: P46,47,48,52,53,72; CH 22: P10,14,16)
	7	R <b>QUIZ 5</b> ; group work
	8	L <i>Applications of Faraday's Law</i> (Read Ch. 22 S6,7,9,10; SAT 22.2)
May	9	<b>Last day to drop without petition</b>

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Eighth week -		<b>LAB 7: Faraday's Law</b>
May	12	R Ch 22 Q 12,14, P31; demonstration problem <b>ONLINE PRELAB #7 due at 5:00 PM</b>
	13	L <i>Waves and Electromagnetic Radiation, Light Rays</i> (Read Ch. 16 S1,2; Ch 24 S1-3; Ch25 S1) <b>ONLINE HW #7</b> due at 11:30 PM (Ch 22: P20,27,40,54,56,64; Ch 16: P2,6; Ch24:P12,18)
	14	R <b>QUIZ 6</b> ; group work
	15	L <i>Light Rays; Reflection; Flat Mirrors</i> (Read Ch. 25 S1-3; SAT 25.1)

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Ninth week -		<b>LAB 8: Reflection (Optical Illusions)</b>
May	19	R Ch 16 Q 4,11, Ch 25 Q 1,2; demonstration problem <b>ONLINE PRELAB #8 due at 5:00 PM</b>
	20	L <i>Spherical Mirrors</i> (Read Ch. 25 S4-7; SAT 25.2) <b>ONLINE HOMEWORK #8</b> due at 11:30 PM (Ch 25 P2,4,5,8,32,36,16,18)
	21	R <b>QUIZ 7</b> ; group work
	22	L <i>Refraction</i> (Read Ch. 26 S1,2)

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Tenth week -		<b>NO LAB</b>
May	26	<b>HOLIDAY</b>
	27	L <i>Total internal reflection; Lenses</i> (Read Ch. 26 S3,6,7) <b>ONLINE HOMEWORK #9</b> due at 11:30 PM (Ch. 25 P33,34; Ch 26 P3,4,5,10,11,18)
	28	R Ch 25 Q 3,6, Ch 26 Q 2,3; demonstration problem
	29	L <i>Thin Lens equation</i> (Read Ch. 26 S6,7,8)
	30	<b>Online Homework #10</b> due 11:30PM: (Ch 26: P24,26,44,51,56,104)

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## FINAL EXAM SCHEDULE

**Your Final Exam will be held in your recitation room**

**MONDAY, JUNE 2, 2008 at 7:30 AM - 9:18 AM** - FINAL EXAM for 8:30 Section.

**TUESDAY, JUNE 3, 2008 at 9:30 AM - 11:18 AM** - FINAL EXAM for 9:30 Section.

Make NO commitment that conflicts with your scheduled final exam listed above. See the course manager, Dr. Rallis (office SM 1036B, email: rallis.1@osu.edu), by Friday, April 25<sup>th</sup> if a conflict exists.