

Instructor: Professor Douglass Schumacher. Office: 1106F Smith Laboratory. Phone: 292-7035. E-mail: dws@mps.ohio-state.edu. Office hours: Mondays and Wednesdays from 1:30 to 3:00.

Text (required): Fundamentals of Physics Extended, Halliday, Resnick & Walker, Sixth Edition (Wiley).

Laboratory Manual (required): Laboratory manual: Physics 133, Alan VanHeuvelen (Hayden-McNeil).

Grade: There are 640 possible points divided into six components: Laboratory (100), Homework (40), Quizzes (100), Midterm I (100), Midterm II (100), and Final Exam (200).

Laboratory: The first lab begins the week of September 29. The labs are listed in the Assignment Sheet and Class Schedule and you need to bring the lab write-up from your lab manual for each week. There are six labs, but the lowest score is dropped.

Homework: The weekly assignments are listed on the next page and they are due on Tuesday of the week after they are listed. (There will be some exceptions to this rule at the end of the quarter.)

Quizzes: There are five quizzes, each about ten minutes in duration. The lowest scoring one is dropped. A calculator is required and no notes are allowed.

Exams: A single 8 ½" x 11" page of notes is allowed for each midterm. You may use both sides and there are no restrictions on content. Two such pages are allowed for the final. A calculator is required.

Missed Quizzes, Exams, or Labs: There are no make-up quizzes or exams. Missed quizzes and exams may be excused and missed labs may be made up while the apparatus remains in the lab -- but only with the permission of Dr. Adelson (phone 292-2067; e-mail adelson@mps.ohio-state.edu; room 1036A, Smith Laboratory). Present documentation to him to verify that your absence was unavoidable.

Contact Dr. Adelson as soon as possible.

Study Aids

Free tutoring is available in the tutor room (room 1011A, Smith Lab). A schedule of tutor room hours will be posted on the tutor room door shortly after class starts.

The class web site containing "Answer Clues" to the homework problems, homework and exam solutions and other helpful material is at the URL: www.physics.ohio-state.edu/~dws/class/133/133.html

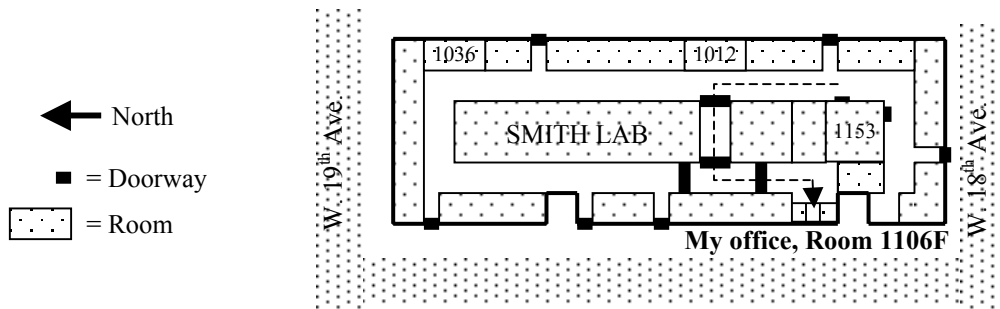
Optional review sessions before each Midterm and the Final will be held on:

Tuesday, October 14, 6:30 - 8:18 PM in 100 Independence Hall.

Tuesday, November 4, 6:00 - 7:48 PM in 100 Independence Hall.

Sunday, December 7, 2:30 - 4:30 PM in 1153 Smith Laboratory.

Office hours: Mondays and Wednesdays from 1:30 to 3:00 and by appointment.



WEEK #1	LAB: NONE	WEEK #7	LAB: NONE
HOMEWORK	Ch. 16: Q3,Q7,3,12,20,22,33,36,S84,S86,55	HOMEWORK	Ch. 37: Q6,Q7,2,4,6, 9,10, 27,28, 31,32
SEP 24 W L	Simple Harmonic Motion (Ch. 16: 1-3)	NOV 3 M L	Young's Experiment
25 R R	Oscillations	4 T R	Prepare for Midterm II
26 F L	Energy, The Pendulum (Ch. 16: 4,6,7)	5 W L	Single Slit Diffraction (Ch. 37: 1-3)
		6 R R	MIDTERM II (Chs. 34-36)
		7 F L	Double Slit Diffraction, Gratings (Ch. 37: 4-7)
WEEK #2	LAB: VIBRATIONS	WEEK #8	LAB: NONE
HOMEWORK	Ch. 17: Q1,Q5,2,S57,S64,8,16,S60,26,33,38,40	HOMEWORK	Ch. 38: Q4,Q10,S58,3,6,11,12,25,26,37,S61
SEP 29 M L	Driven oscillators (Ch. 16: 8,9)	NOV 10 M L	Special Relativity: Postulates (Ch. 38: Sect 1-3)
30 T R	Waves	11 T -	Veteran's Day, no classes
OCT 1 W L	Transverse, Longitudinal Waves (Ch. 17: 1-5)	12 W L	Simultaneity and Time (Ch. 38: 4-6)
2 R R	QUIZ 1 (Ch. 16)	13 R R	Special Relativity
3 F L	Strings and Superposition (Ch.17: 6-9)	14 F L	Time and Length (Ch. 38: 9-12)
WEEK #3	LAB: STANDING WAVES	WEEK #9	LAB: MULTIPLE SLIT INTERFERENCE
HOMEWORK	Ch. 18: Q14,2,5,10,13,16,22,28,S75,S76	HOMEWORK	Ch. 39: 5,8,38,43,50,64,74,75 and Handout problems.
OCT 6 M L	Interference (Ch. 17: 11-12)	NOV 17 M L	Special Relativity: Problem Solving
7 T R	Waves	18 T R	Special Relativity
8 M L	Sound waves (Ch. 18: 1-3)	19 W L	Velocity, Energy, and Momentum
9 R R	QUIZ 2 (Ch. 17)	20 R R	QUIZ 4 (Ch. 38)
10 F L	More Interference (Ch.18: 4-7)	21 F L	Photons and Electrons (Ch. 39: 1-4)
WEEK #4	LAB: NONE	WEEK #10	LAB: NONE
HOMEWORK	Ch. 34: Q7,1,S82,9,45,S69,53,57	HOMEWORK	Ch. 40: Q2,Q4,4,6,11,14,17 and Handout problems.
OCT 13 M L	Doppler Effect (Ch. 18: 8,9)	NOV 24 M L	Probability Waves (Ch. 39: 5-7)
14 T R	Prepare for Midterm I	25 T R	Waves In Quantum Mechanics
15 W L	Maxwell's Equations & EM Waves (Ch. 34: 1-3)	26 W L	Electrons - Uncertainty, Tunneling (Ch. 39: 8-9)
16 R R	MIDTERM I (Chs. 16-18)	27 R ☺	Thanksgiving Day, no classes
17 F L	Reflection and Refraction (Chap 34: 6-8)	28 F ☺	Columbus Day (observed), no classes
WEEK #5	LAB: WAVE INTERFERENCE: BEATS AND COMPLEX WAVES	WEEK #11	LAB: POTENTIAL WELLS
HOMEWORK	Ch. 35: Q1,Q2,1,6,S61,18,27,S60,28,35	HOMEWORK	NONE
OCT 20 M L	EM Waves	DEC 1 M L	Matter Waves and Wells (Ch. 40: 1-4)
21 T R	Review Midterm I	2 T R	Matter Waves and Wells
22 W L	Images and Plane Mirrors (Chap 35: 1,2)	3 W L	Quantum Mechanics: Problem Solving
23 R R	EM Waves and Images	4 R R	QUIZ 5 (Chs. 39,40)
24 F L	Thin Lenses (Chap 35: 5,6)	5 F L	Quantum Mechanics: Technology and Progress Towards Understanding The Universe
WEEK #6	LAB: MICROWAVE INTERFERENCE		
HOMEWORK	Ch. 36: Q7,1,5,7,10,12,13,20,21,27		
OCT 27 M L	Thin Lenses and Optical Instruments (Ch. 35: 7)		
28 T R	Images		
29 W L	Interference and Diffraction (Ch. 36: 1-3)		
30 R R	QUIZ 3 (Ch. 35)		
31 F L	Young's Double Slit Experiment (Ch. 36: 4-6)		

The **FINAL EXAMINATION** is scheduled based on the Tuesday recitation meeting time and will be given in your recitation room on:

Wednesday, December 10, from 9:30 to 11:18.

Homework assignments: An entry such as "S64" means problem 64 from the problem supplement. The problem supplement comes with the text and has a green cover.