

Physics 402: Optics (Fall 2008)

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Course Website: <http://ctools.umich.edu/>

Lecture: MW 1:00 – 2:30, 4404 Randall
Office Hours: F 1:00 – 2:30, 4424 Randall

Required Text: B.E.A. Saleh & M.C. Teich, *Fundamentals of Photonics*, 2nd ed. (2007).
Recommended Text: G.R. Fowles, *Introduction to Modern Optics*, 2nd ed. (1989).

Grading:

Homework: 25% (Due **in class**. Late homework will **not** be accepted!)
Midterm 1: 25% (In class. Mon. Oct. 6, 2008)
Midterm 2: 25% (In class. Mon. Nov. 17, 2008)
Final Exam: 25% (Per Registrar, 4:00 – 6:00 pm, Thurs. Dec. 11, 2008)

Course Syllabus:

B.E.A. Saleh & M.C. Teich, *Fundamentals of Photonics*, 2nd ed. (2007).
Ch. 1: Ray Optics
Ch. 2: Wave Optics
Ch. 3: Beam Optics
Ch. 10: Resonator Optics
Midterm 1: In class. Mon. Oct. 6, 2008
Ch. 4: Fourier Optics
Ch. 5: Electromagnetic Optics
Ch. 6: Polarization Optics
Ch. 21 Nonlinear Optics
Midterm 2: In class. Mon. Nov. 17, 2008
Ch. 11: Statistical Optics
Ch. 12: Photon Optics
Final Exam: Per Registrar, 4:00 – 6:00 pm, Thurs. Dec. 11, 2008

September 2008

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 LABOR DAY	2 FALL 2008 SEMESTER FIRST DAY	3 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 1 & 10	4	5 PHYS402 OFFICE HOURS 1:00 – 2:30 PM 4424 RANDALL	6
7	8 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 1 & 10	9	10 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 2 & 10	11	12 PHYS402 OFFICE HOURS 1:00 – 2:30 PM 4424 RANDALL	13
14	15 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 2 & 10 DUE: Homework #1	16	17 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 2 & 10	18	19 PHYS402 OFFICE HOURS 1:00 – 2:30 PM 4424 RANDALL	20
21	22 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 3 & 10 DUE: Homework #2	23	24 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 3 & 10	25	26 PHYS402 OFFICE HOURS 1:00 – 2:30 PM 4424 RANDALL	27
28	29 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 4 DUE: Homework #3	30				

October 2008

October 2008						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 4	2	3 PHYS402 OFFICE HOURS 1:00 – 2:30 PM 4424 RANDALL	4
5	6 PHYS402 <u>MIDTERM EXAM #1</u> 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 1-3, 10	7	8 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 4	9	10 PHYS402 OFFICE HOURS 1:00 – 2:30 PM 4424 RANDALL	11
12	13 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 5 <u>DUE: Homework #4</u>	14	15 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 5	16	17 PHYS402 OFFICE HOURS 1:00 – 2:30 PM 4424 RANDALL	18
19	20 FALL STUDY BREAK	21 FALL STUDY BREAK	22 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 5	23	24 PHYS402 OFFICE HOURS 1:00 – 2:30 PM 4424 RANDALL	25
26	27 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 6 <u>DUE: Homework #5</u>	28	29 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 6	30	31 PHYS402 OFFICE HOURS 1:00 – 2:30 PM 4424 RANDALL	

November 2008

November 2008						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 6	4	5 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 21	6	7 PHYS402 OFFICE HOURS 1:00 – 2:30 PM 4424 RANDALL	8
9	10 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 21 <u>DUE: Homework #6</u>	11	12 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Applications Day: Optical Tweezers	13	14 PHYS402 OFFICE HOURS 1:00 – 2:30 PM 4424 RANDALL	15
16	17 PHYS402 <u>MIDTERM EXAM #2</u> 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 4-6, 21	18	19 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 11	20	21 PHYS402 OFFICE HOURS 1:00 – 2:30 PM 4424 RANDALL	22
23	24 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 11	25	26 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 11	27 THANKSGIVING BREAK	28 THANKSGIVING BREAK	29
30						

December 2008

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 12 <u>DUE: Homework #7</u>	2	3 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL Saleh & Teich, Ch. 12	4	5 PHYS402 OFFICE HOURS 1:00 – 2:30 PM 4424 RANDALL	6
7	8 PHYS402 – CLASS 1:00 – 2:30 PM 4404 RANDALL “YEAR IN REVIEW” <u>DUE: Homework #8</u>	9 FALL 2008 SEMESTER LAST DAY	10 PHYS402 OFFICE HOURS 1:00 – 2:30 PM 4424 RANDALL	11 PHYS402 <u>FINAL EXAM</u> 4:00 – 6:00 pm Saleh & Teich, Ch. 1-6, 10-12, 21	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			