PHY410, Fall 2013, Course Schedule

Instructor: Dr. Matthew M. Waite, MER 133, ext: 2573, mwaite@wcupa.edu

Class Meeting: MWF 9:00-9:50 am

Office Hours: MTuWF 11-12 am, MTuW 1-1:30 pm, or by appointment

Course Web Page:

D2L

Course information can be found here throughout the semester. The syllabus, homework problem solutions, and other interesting stuff can be found here. Check it periodically!!

Text: Introduction to Optics, 3rd Ed., by Pedrotti, Pedrotti & Pedrotti, Prentice Hall. (Upper Saddle River, NJ, 2007)

Grading:

Exams (4 "hourly")	15% @	60%
Homework		20%
Cumulative Final		20%

Attendance:

Excused absences are limited to University-Sanctioned Events (which follow the Excused Absence Policy for University-Sanctioned Events as described in the West Chester University Undergraduate Catalog), and absences due to serious illness or injury (verified by a practicing MD, you must provide me with a phone number), or the death of family members (also to be verified.)

Homework:

Homework is due by 4:00 pm on the due date. At 4:00 pm, the solutions will be posted on the web page. No homework will be accepted late, no exceptions. At the end of the semester, one homework grade will be dropped, so, if you miss one assignment, it's no big deal. But you don't want to make a habit of it, or it could be very damaging to your grade at the end of the semester.

I encourage you to discuss the homework problems together, and to work and learn together, but when you are ready to sit down and write out your solutions, make sure that they are your own solutions.

University Policies:

For questions regarding Academic Dishonesty, the No-Grade Policy, Sexual Harassment, or the Student Code of Conduct, students are encouraged to refer to their major department's handbook, the Undergraduate Course Catalogue, the Rams Eye View, or the University Web Site. Please understand that improper conduct in any of these areas will not be tolerated and may result in immediate ejection from the class.

Exams:

There will be three hourly exams throughout the semester. These hourly exams will focus on the most recently covered lecture and class material, but they should be considered cumulative in the sense that we will be building upon what we have already learned throughout the semester. I DO NOT give make up exams. If you miss an exam, you will receive a ZERO for that exam and it will be recorded as a zero. Only under very special circumstances will there be any change to this policy, and in those cases, exceptions will be made ONLY when I am notified prior to the scheduled exam time of a conflict. If you have ANY questions or concerns about this particular point, please come talk to me and get clarification BEFORE it's too late!

Schedule: (This schedule is tentative, I will try to follow it as closely as possible!)

Month	Date	Week	Reading	Topic
Aug.	26	1-M	1	Introduction & History
	28	W	2	Review of Geo. Optics - Reflection
	30	F	2	Review of Geo. Optics - Refraction (Ch.1)
Sept.	2	2-M	None	Labor Day
	4	W	2	Review of Geo. Optics - Lenses & Systems
	6	F	3	Optical Devices - Stops, Pupils & Windows (Ch. 2)
	9	3-M	3	Optical Devices - Prisms
	11	W	3	Optical Devices - Magnifiers and Scopes
	13	F	19	Optics of the Eye - Structure & Functions (Ch. 3)
	16	4-M	19	Optics of the Eye - Corrections
	18	W	Exam I	Review & Optical Devices (Ch 1, 2, 3)
	20	F	20	Aberration Theory (Ch. 19)
	23	5-M	20	Aberration Theory
	25	W	4	Wave Equations
	27	F	4	Wave Equations (Ch. 20)
	30	6-M	4	Wave Equations
Oct.	2	W	5	Superposition of Waves
	4	F	5	Superposition of Waves (Ch. 4)
	7	7-M	None	Fall Break
	9	W	5	Superposition of Waves
	11	F	7	Interference (Ch. 5)
	14	8-M	Exam II	Eye's, Aberrations & Waves (Ch 19, 20, 4, 5)
	16	W	7	Interference
	18	F	7	Interference
	21	9-M	8	Interferometry - Michelson (Ch. 7)
	23	W	8	Interferometry - Fabry-Perot
	25	F	11	Fraunhofer Diffraction (Ch. 8)
	28	10-M	11	Fraunhofer Diffraction
	30	W	11/12	Fraunhofer Diffraction & Fresnel Diffraction
Nov.	1	F	12	Fresnel Diffraction (Ch. 11)
	4	11-M	12	Fresnel Diffraction
	6	W	15	Polarized Light
	8	F	15	Polarized Light (Ch. 12)
	11	12-M	15	Polarized Light
	13	W	Exam III	Interference & Diffraction (Ch 7, 8, 11, 12)
	15	F	14	Polarization Matrices
	18	13-M	14	Polarization Matrices (Ch. 15)
	20	W	18	Matrix Methods

	22	F	18	Matrix Methods
	25	14-M	18	Matrix Methods **(Ch. 14)**
	27	**W**	**None**	**Thanksgiving Break**
	29	**F**	**None**	**Thanksgiving Break**
Dec.	2	15-M	18/16	Matrices & Holography
	4	W	16	Holography **(Ch. 18)**
	6	F	16	Holography
	9	M	Exam IV	Polarization, Matrices & Holography (Ch 14, 15, 18, 16)