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Fall 9-1-2001

### PHYS 422.01: Optics I

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# Physics 322 - Optics I

## Fall Semester 2001

LECTURES:	MW 12:10 - 1:00pm SC (Science Complex) Bldg. Rm 231																
INSTRUCTOR:	Andrew Ware Office: SC Bldg. Rm 120, (Tel. No. 243-6221) Email: aware@selway.umd.edu Office Hours: MWF 11-12, T 9-10, R 1-2																
WEBSITE:	<a href="http://www.physics.umd.edu/phys322/">http://www.physics.umd.edu/phys322/</a>																
TEXTBOOK:	<b>Optics</b> by E. Hecht, 4th Ed. (Addison-Wesley, 2002)																
PREREQUISITE:	Phys 222N and corequisite Math 251																
HOMEWORK:	Problem assignments (about 1 assignment per week) These will be collected and graded.																
LABS:	There will be approximately 3 labs during the semester. You will work in groups of two or three but each person will turn in their own lab report.																
TOPICS:	<table><tr><td><b>Introduction</b></td><td>Chp. 1</td></tr><tr><td><b>Reflection, refraction, Fermat's law</b></td><td>Chp. 4</td></tr><tr><td><b>Geometrical optics</b></td><td>Chp. 5</td></tr><tr><td><b>Wave basics</b></td><td>Chp. 2</td></tr><tr><td><b>Photons and light, EM theory</b></td><td>Chp. 3</td></tr><tr><td><b>Propagation of electromagnetic waves</b></td><td>Chp. 4</td></tr><tr><td><b>Superposition</b></td><td>Chp. 7</td></tr><tr><td><b>Polarization (time permitting)</b></td><td>Chp. 8</td></tr></table>	<b>Introduction</b>	Chp. 1	<b>Reflection, refraction, Fermat's law</b>	Chp. 4	<b>Geometrical optics</b>	Chp. 5	<b>Wave basics</b>	Chp. 2	<b>Photons and light, EM theory</b>	Chp. 3	<b>Propagation of electromagnetic waves</b>	Chp. 4	<b>Superposition</b>	Chp. 7	<b>Polarization (time permitting)</b>	Chp. 8
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EXAMS:	Two 50-minute exams, on W 10/3 and M 11/19  One 2-hour final exam (8:00am - 10:00am, Fr 12/21) * Comprehensive but weighted towards the material presented after the last in class exam.																
GRADING:	<table><tr><td>50-minute exams</td><td>30 % (15 % each)</td></tr><tr><td>Homework</td><td>20 %</td></tr><tr><td>Labs</td><td>25 %</td></tr><tr><td>Final exam</td><td>25 %</td></tr></table>	50-minute exams	30 % (15 % each)	Homework	20 %	Labs	25 %	Final exam	25 %								
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[This course can be taken for a traditional letter grade (A,B,C,D,F) only]