

# Fundamental of Optics

CACT 21 MW 6 – 9 pm

Instructor: Donn Silberman

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Textbook – *Fundamentals of Optics*, Jenkin and White (McGraw-Hill) 4<sup>th</sup> Edition

Additional resources from University of Aberdeen, Physics Dept.

(JSR) Light Science course PX 2013

<http://www.abdn.ac.uk/physics/px2013/index.html>

Optics Laboratory – Pasco Introductory Optics System Model OS-8500

Additional handouts from instructor

[http://oisc.net/optics\\_class\\_download\\_page.htm](http://oisc.net/optics_class_download_page.htm)

Students will only be responsible for material covered in class, lab & homework – not all material in the text.

Week	Dates	Topics	J&W Ch.	Lab Mon	Lab Wed	Homework From J&W	Comments
1	Sept 5	Light	1		1	1, 5, 10, 13	
2	Sept 10 & 12	Plane Surfaces	2	8	2	1, 3, 8, 13	
3	Sept 17 & 19	Spherical Surfaces	3	3	4	1, 9, 10, 18	Donn out
4	Sept 24 & 26	Thin & Thick Lenses	4 & 5	5	7	4.1, 4.2, 4.5 5.1, 5.9, 5.19	
5	Oct 1 & 3	Spherical Mirrors	6	11	12	1, 7, 13	
6	Oct 8 & 10	Stops & Ray Tracing	7 & 8			7.1, 7.2, 8.2	Donn out 10th
7	Oct 15 & 17	Aberrations	9	13	14	TBD	
8	Oct 22 & 24	Optical Instruments	10	18, 19	20	4, 10	
9	Oct 29 & 31	Review / Midterm		21	22		
10	Nov 5 & 7	Light Waves	11				
11	Nov 12 & 14	Interference	12-14	9			BLI Trip 14th
12	Nov 19 & 21	Diffraction	15-18	15, 16	17		
13	Nov 26 & 28	Dispersion	23	6			
14	Dec 3 & 5	Polarization	24	10			
15	Dec 10 & 12	Holography / other	31				Donn out 12th
16	Dec 17 & 19	Review / Final					

## GRADING POLICY

Grades will be traditionally letter based ‘A’ being the highest and ‘F’ being failing.

Each student must hand in their own original homework and lab reports.

*See Irvine Valley College Academic Honesty and Dishonesty Policy*

‘A’ will be 90% and higher

‘B’ will be 80% to 89%

‘C’ will be 70% to 79%

‘D’ will be 60% to 69%

‘F’ will be 59% and below.

Grade breakdown will be as follows:

Homework will count for 35%

Labwork will count for 35%

MidTerm will count for 15%

Final Exam will count for 15%

Other grading arrangements can be discussed with the instructor and CACT Director Larry DeShazer.

Center for Applied Competitive Technologies

Advanced Technology & Education Park

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