

Physics 108 Assignment#4 (due on 4/25/2016)

Reading materials:

Pedrotti 3rd Edition: **Chapter 8:** 8-1 through 8-7
Lecture Notes: pp. 46 - 57

Homework: (Pedrotti 3rd Edition)

1. 8-4
2. 8-5
3. 8-6
4. 8-10
5. 8-11
6. (Optional for an extra point) Find a research article using Google that describes how Optical Coherent Tomography (OCT) works in medical imaging.
7. (Optional for an extra point) Find a research article using Google that describes how Bio-Layer Interferometry (BLI) works in detecting chemical reactions.
8. **(Due 5/9/16) *Landscape Lens*:** Perform the Introductory Exercise on Landscape Lens using OSLOEDU software. Show YOUR results by (1) displaying the starting “Surface Data” and “Lens Drawing” for paraxial rays and non-paraxial rays; and (2) displaying your optimized “Surface Data” and “Lens Drawing” for paraxial rays and non-paraxial rays. (You may also try the following condition for start: and “draw off”).

SRF	RADIUS	THICKNESS	APERTURE RADIUS	GLASS	SPE
OBJ	--	1.6000e+03	582.352375	AIR	*
1	21.807957 V	4.000000	11.666830 S	BK7	C
2	27.777778	12.647480 V	9.997114 S	AIR	
AST	--	155.058604 S	4.341641 AS	AIR	*
IMS	--	--	67.000000		*