PHYS 202     Study Guide for Final

Final exam format will be similar to past tests; will consist of MC questions, questions, and problems.

Study the past three tests (Test #1, Test #2, and Test #3) and the related materials. Refer back the study guides for each of the past three tests.

Chapter 25: Wave fronts and rays, law of reflection, specular & diffuse reflection, image formation in plane mirrors, and concave and convex mirrors.

Chapter 26: Index of refraction, Snell's law, total internal reflection, polarization, dispersion, rainbow, lenses, human eye & vision defects of the human eye, magnifier, compound microscope, telescope, and lens aberrations.

 Snell’s law: $n\_{1}Sinθ\_{1}=n\_{2}Sinθ\_{2}$

 Telescope: magnification = $\left|m\right|=\frac{f\_{o}}{f\_{e}}$ Length: (*f0+fe)*

Chapter 27: Wave Phenomena

1. Use of mirror/lens equation and the equation for magnification in solving image formation problems with plane, concave, and convex mirrors and lenses.

 **     **2. Drawing ray diagrams to show the focal point and focal length of spherical mirrors and lenses.

3. Drawing ray diagrams to show the formation of images in spherical mirrors and lenses.

4. Power of a lens and prescribing lenses to correct vision defects.

5. Solving refraction and total internal reflection problems using Snell's law.

6. You should know how to define the following: Real image, virtual image, focal point, focal length, index of refraction, critical angle, nearsightedness, and farsightedness.

7. Practice work sheets and BB hwk problems.