

**J. Sargeant Reynolds Community College  
Course Content Summary**

**Course Prefix and Number:** OPT 122

**Credits:** 3

**Course Title:** Optical Theory II

**Course Description:**

Explores the development of multifocal lenses, application of multifocal lenses, survey of current ophthalmic lenses, the properties of sphero-cylinder lenses, and an in-depth analysis of the optics of ophthalmic prisms, which includes prisms notation, vertical imbalance, and anisometropia. Prerequisite: OPT 121 or equivalent. Lecture 3 hours per week.

**General Course Purpose:**

This course, a requirement of the Opticianry AAS degree and Opticians Apprentice Career Studies Certificate programs, is designed to provide students with a knowledge base of optical theory principles to function as effective opticians.

**Course Objectives:**

Upon completing the course, the student will be able to:

1. Calculate vertical imbalance and choose appropriate methods for correcting it.
2. Explain, calculate, and notate wanted and unwanted prism power and direction.
3. Determine lens power in any meridian.
4. Calculate multifocal image jump based upon multifocal types.
5. Calculate the amount and direction of resultant prism.

**Major Topics to be Included:**

1. Basic Prism
2. Oblique Meridians
3. Prentice Rule
4. Binocular Prism
5. Multifocals and Image Jump
6. Anisometropia and Vertical Imbalance
7. Bicentric Grinding/Slab off
8. Prism Notation
9. Resultant and Resolving Prism

**Effective Date of Course Content Summary:** January 7, 2013