

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

**Course Prefix and Number:** OPT 122

**Credits:** 3

**Course Title:** Optical Theory II

**Course Description (including lecture hours, lab hours, total contacts)**

Explores the development of multifocal lenses, application of multifocal lenses, survey of current ophthalmic lens, the properties of spherocylinder lenses, and an in-depth analysis of the optics of ophthalmic prisms. Includes prism notation, vertical imbalance, and anisometropia. Lecture 3 hours per week.

**General Course Purpose**

This course is designed to provide students with a knowledge base of optical theory principles to enable them to function as effective opticians.

**Course Prerequisites/Corequisites**

OPT 121 or equivalent

**Course Objectives**

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

- a. Understand basic prism
- b. Determine powers in any meridian
- c. Identify various multifocal lens types with optical center locations
- d. Calculate multifocal image jump
- e. Explain and Calculate vertical imbalance
- f. Explain methods of correcting vertical imbalance
- g. Explain prism notation
- h. Calculate unwanted prism
- i. Determine the amount of resultant prism

**Major Topics to be Included**

- A. Basic Prism
- B. Oblique Meridians
- C. Prentice Rule
- D. Binocular Prism
- E. Multifocals & Image Jump
- F. Anisometropia & Vertical Imbalance
- G. Bicentric Grinding/Slab-off
- H. Prism Notation
- I. Resultant and Resolving Prism

**Effective Date of Course Content Summary (Month, Date Year):** August 1, 2008