

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

**Course Prefix and Number:** OPT 151

**Credits:** 3

**Course Title:** Optical Laboratory Theory II

**Course Description:** Covers making eyeglasses with advanced prescriptions and frames. Includes verification and neutralization techniques for single vision lens and bifocals, frame repair, accomplishing prescribed prism by decentration, verification and neutralization, semi-rimless glasses, and multifocal glasses. Prerequisite: OPT 150 and OPT 152 or equivalent. Co-requisite: OPT 153. Lecture 3 hours per week.

**General Course Purpose:** This course, a requirement of the Opticianry AAS degree and the Opticians Apprentice Career Studies Certificate, is designed to provide students with a knowledge base of optical laboratory theory to enable them to function as effective opticians.

**Course Prerequisites and Co-requisites:**

Prerequisite: OPT 150 and OPT 152 or equivalent

Co-requisite: OPT 153

**Course Objectives:**

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

- a. Explain characteristics of, and nomenclature for, multifocal, progressive, and occupational lenses;
- b. Calculate horizontal and vertical layout decentration for multifocal and progressive lenses;
- c. Understand the basic lensometry procedures to verify and neutralize multifocal and progressive lenses, including the application of ANSI standards;
- d. Convert multifocal prescriptions to near and intermediate prescriptions;
- e. Understand the effect of lens treatments such as anti-reflective, polarized, and color tinting;
- f. Induce wanted prism into lenses and demonstrate prism verification;
- g. Understand fabrication of slab-off lenses; and
- h. Understand proper waste disposal procedures and applicable government regulations.

**Major Topics to Be Included:**

- a. Multifocal finishing
- b. Progressive lens finishing
- c. Nylon cord mountings
- d. Occupational lens finishing
- e. Lens treatments
- f. Inducing and verifying prism
- g. Bicentric grinding
- h. Waste disposal

**Effective Date of Course Content Summary:** August 1, 2013