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