

Course Description

OPT1150 | Ophthalmic Lenses | 2.00 credits

This course covers the characteristic of unifocal and multifocal lens reference points for proper lens selection to meet visual needs of the patients. Emphasis is on accurate positioning of the optical centers and selected multi-focal addition design. ANSI and FDA standards; prescription ordering; verification procedures; absorptive lenses; and invisible and progressive multi-focal are presented. Prerequisites: OPT1110, OPT1205

Course Competencies:

Competency 1: The student will use knowledge from geometrical and physical optics to the area of practical optics in the design of the patient's ophthalmic prescription by:

1. Learning to explain the various lens designs
2. Learning to explain the frame size
3. Explaining the optimum lens shape

Competency 2: The student will explain the procedures necessary to properly position the optical center and the multifocal components of an ophthalmic prescription before the patient's eyes in the selected frame style by:

1. Explaining the definition and procedures to measure the patient's pupillary distance
2. Explaining the optical center placement and the correlation with the major reference point
3. Explaining how to measure a progressive lens design fitting height and multifocal segment fitting heights

Competency 3: The student will appraise the limitations in lens size and frame style imposed by the nature of the prescription power and the patient's pupillary distance separation by:

1. Understanding the plus lenses limiting factors
2. Understanding the minus lens limiting factors

Competency 4: The student will solve problems by computing and, when necessary, neutralizing unwanted prismatic effects at the lens reading level by:

1. Calculating slab off
2. Understanding when the slab off is necessary

Learning Outcomes:

- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning