

Course Title

Binocular Brilliance

1 Hour ABO

Technical Level II

Intended for experienced opticians with a basic understanding of optics.

Course Description

This course explores the dynamics of binocular vision. You will understand the significant role binocular vision has with stereopsis, coordination and expanded peripheral views and will review the lens technologies that help balance binocular anomalies.

Course Objectives

- Demonstrate the importance of binocular vision.
- Review the effects of unwanted prism and how to counter them.
- Understand binocular technologies in progressive lenses.

Course Outline

- Introduction (5 min)
 - Course Objectives
- Why two eyes are better than one (10 min)
 - Stereopsis
 - 3D vision
 - Demonstrate power of binocular vision
 - Retinal disparity
 - Recognize objects
 - Demonstrate through hole in hand demo
 - Improved coordination
 - Wider field of vision
 - Widescreen viewing
 - > 180° peripheral views
 - Eliminate blind spots
 - Demonstrate blind spot locations
- Importance of binocular vision (10 min)
 - Proper eye alignment creates binocularity
 - Lenses must create binocular equivalent images
 - Refracting light can create issues
- Visual effects for anisometropic patients (15 min)
 - Prism effects for same Rx in each eye
 - Prism effects for different Rx in each eye
 - Technologies that help eliminate/balance unwanted prism
 - Vertical prismatic issues

- Horizontal prismatic issues
- Review the importance of POW measurements (10 min)
 - Define POW Measurements
 - Why is compensation necessary?
 - Refractive vs. eyeglass lenses
 - Review importance of digital measuring
- Closing Summary & Questions (5 min)