

Mastering Optical Dispensary Tools

1 hour

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Course Description

Join renowned Master Optician Phernell Walker for an engaging education course designed specifically for opticians and optical technicians. Learn about the essential tools used in an optical dispensary, including a variety of specialized pliers such as nose pad pliers, angling pliers, chain nose pliers, cutting pliers, eye-wire pliers, compression pliers, and more. Participants will gain expert tips to optimize their skills in frame adjustment, repair, and customization. Whether you are new to the field or looking to refine your technique, this course will empower you to deliver exceptional eyewear fitting and service for your patients.

Learning Objectives

Upon completion of this course, students should be able to:

1. Identify the purpose and proper use of essential dispensary tools, including various types of pliers and their specific functions in eyewear adjustments and repairs.
2. Describe appropriate use of nose pad, angling, chain nose, cutting, eyewire, and compression pliers for common optical tasks.
3. Describe best practices and safety techniques for frame adjustments, ensuring optimal fit and patient comfort.

Time Course Outline

I. Introduction (2 min)

The session will begin with a brief introduction to the importance of proper eyewear fitting and adjustment in opticianry. This overview will set the stage for understanding how using the correct tools and techniques can improve patient comfort, vision, and satisfaction. Participants will learn the objectives of the workshop and the skills they will acquire.

II. Optician's Tool Kit Explained (35 min)

This segment will introduce the essential tools used by opticians for frame adjustment and repair. Each tool will be described in detail, including its function, variations, and best practices for use. Participants will see demonstrations of how each tool contributes to achieving a precise and comfortable fit for eyewear.

Define Common Tools and Demonstrate Frame Fit Using Dual Over Head Projectors

1. Tools

a. Fiber jaw plier (dual vs. mono)

Fiber jaw pliers are designed with soft jaws to prevent scratching or damaging frame surfaces. Dual jaw pliers offer more stability for gripping larger parts, while mono jaw pliers are used for more delicate adjustments. These tools are ideal for bending temples or adjusting the frame front without marring the finish.

b. Nose pad pliers

Nose pad pliers are specifically shaped to adjust or replace nose pads on eyewear frames. They allow precise control over the pad arms, ensuring comfort and symmetry for the wearer. These pliers help avoid damage to small components during adjustments.

c. Closing / sizing plier

Closing and sizing pliers are used to adjust eyewear frame sizes, especially at the endpieces and hinges. They help ensure that the temples fit snugly to the wearer's head, preventing slippage and improving comfort.

d. Bionic thumb

The bionic thumb is a specialized tool designed to simulate the pressure and dexterity of a human thumb when adjusting eyewear. It allows for controlled bending and shaping of frames, offering precision and reducing the risk of injury to the optician's hand.

e. Contouring plier

Contouring pliers are crafted to shape and curve metal or plastic eyewear frames. They help achieve the ideal face form, ensuring the frame wraps comfortably around the wearer's face for both aesthetics and stability.

f. Nylon gripping plier

Nylon gripping pliers feature durable nylon jaws for a firm yet gentle hold on frames. They are ideal for working with delicate materials, such as acetate or rimless frames, without causing scratches or pressure marks.

g. Compression plier

Compression pliers are used to squeeze and secure eyewear components, such as spring hinges or rivets. They apply controlled pressure, ensuring that parts are firmly attached without damaging the frame material.

h. Screwdriver (i.e. tip options w/ size variables)

Screwdrivers come in various tip shapes and sizes to fit the different screws found in eyewear frames. Having a selection ensures the optician can tighten or loosen screws securely, preventing stripping or damage to the frame hardware.

i. Spring hinge tool

Spring hinge tools are specialized for working with spring-loaded hinges, which provide flexibility and durability in eyewear. These tools allow for safe adjustment and maintenance of hinge tension, ensuring smooth temple movement and longevity of the frame.

j. Self-closing tweezer

Self-closing tweezers automatically grip small components such as screws, washers, or nose pads, freeing up the optician's hands for other tasks. They are especially useful for handling tiny parts during frame assembly or repair.

k. Cutting plier

Cutting pliers are designed for trimming excess metal, wire, or plastic from eyewear frames. They enable precise cuts when shortening temples or removing damaged components, ensuring a clean finish.

l. Coarse file types

Coarse files are used to smooth rough edges and shape frame components after cutting or adjusting. They come in various shapes and grit levels to suit different materials and tasks, helping ensure a comfortable and polished finish for the wearer.

1. Frame Alignment Demonstrate

This demonstration will show the step-by-step process for aligning eyewear frames using the tools listed above. Proper frame alignment is crucial for ensuring that the lenses sit correctly in front of the eyes and that the frame fits securely and comfortably.

1. Bench alignment

Bench alignment involves adjusting the frame on a flat surface to ensure the temples and front are level and symmetrical. This step helps identify any warping or misalignment before fitting the frame to a patient.

1. Four-Point Alignment

Four-point alignment checks that the frame touches the surface at four distinct points: both temples and both ends of the frame front. This ensures stability and even pressure distribution, preventing discomfort or distortion of the lenses.

1. Frame tilt (Orthoscopic, Pantoscopic and Retroscopic)

Frame tilt describes the angle at which the frame sits in relation to the face. Orthoscopic tilt means the frame sits perpendicular to the face, pantoscopic tilt angles the frame downward for better lens coverage, and retroscopic tilt angles it upward. Proper tilt enhances visual performance and comfort.

1. Nose Pad Alignment (Frontal, Vertical, Transverse/ Splay)

Nose pad alignment ensures the pads are positioned for maximum comfort and stability. Frontal alignment adjusts the pads horizontally, vertical

alignment changes their height, and transverse/splay alignment sets the angle to match the wearer's nose shape.

Review of basic adjustments and their purpose: (10 min)

Bench alignment

This step helps identify and correct any twists or bends in the frame before individual adjustments are made.

Frame Tilt

Pantoscopic tilt, Orthoscopic and Retrosopic (pantoscopic)

Pantoscopic tilt improves downward gaze comfort, orthoscopic maintains a neutral angle, and retrosopic is used when upward tilt is necessary.

Face form (i.e. frame wrap)

Face form adjustment, or frame wrap, tailors the curvature of the frame front to follow the natural contour of the wearer's face. This ensures both optimal aesthetics and stability of the glasses.

Nose pad alignment

Describe process for aligning nose pads in three dimensions—frontal, vertical, and transverse/splay—to provide maximum comfort and support for different nose shapes and sizes.

Fitting Triangle

The fitting triangle is a principle describing three critical contact points for proper eyewear fit: the bridge of the nose and both ears. This ensures balanced weight distribution and prevents discomfort or slipping.

Temple adjustment

Temple adjustment involves shaping and fitting the temples (arms) of the frame to follow the contours of the wearer's head and ears. Proper adjustment prevents pressure points, ensures stability, and keeps the glasses securely in place.

IV. Conclusion with Question and Answers (3 min)

The session will wrap up with a summary of key points, reinforcing the importance of proper tool use and adjustment techniques. There will be a Q&A segment for students to clarify doubts, discuss challenges, and share experiences, ensuring everyone leaves with a clear understanding of the material covered.