Advanced Dispensing
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Time Referenced Detailed Course Outline:

3 Minutes - Introduction
7 Minutes - Working with Rimless Lab
- Work For Rimless Eyewear
- Drilling
- Finishing the hole
- Protecting the lens
- Rimless frames often have exotic lenses
- Lens tapes are a good bet
- Clean hands
- Clean bench

7 Minutes - Mounting techniques Be sure strap is bent properly
- Proper hardware sequence
- First protect the lens (Top Hat Washers)
- Then protect the protectors (Metal Washers)
- Locknuts or Loc-tite
- Finishing the nut or cap nut
- Mounting
- Barrel Type
- Mounting
- Stud Type
- Tube nuts save the day when studs are too short.

8 Minutes - Compression Mount Frames
- Removal tools
- While continuing pressure from the back, introduce the front plier jaw and compress into place
- Western optical #1050
- Pliers for compression
- Hilco # 21-436
- The compression is now complete

7 Minutes - Nylon suspension mounting
- Interliners
- Avoiding chipped lenses
- Gauging string length
- Should you heat the string
- Using different thicknesses
- Keeping string from slipping
- Insert lens into the top of the frame. Holding the two together, insert a ribbon and pull the string away from and around the lens. When the string pops into the groove, pull one side of the ribbon to remove it. Zyl-Top Rimless

7 Minutes - Customizing for Security Temple
- tip modifications
- Extension tips for more "hook"

Cable makers
Permanent straps and harnesses
Switching to silicone Pads & Tips

11 Minutes - Customizing eyewear for special patient needs and comfort unusual facial characteristics requiring special frame customizing for visual and physical comfort.

Customizing for Extraordinary Needs
Ptosis crutch
Moisture chambers
Wind protection
Incorporating low vision aids
Occlusion methods
Ptosis Crutch on Metal Frame
A Soft Shield and Occluded Lens
Various Moisture Chambers
Ear Difficulties
Due to deformities
Due to trauma
How ears are reconstructed
Microtia
Snuggle Wraps
Traumatic Ear loss & Reconstruction
Ear Reconstruction
Mastoid Process
Nose Difficulties
Cancer surgery
Hypertelorism
Hypertelorism
Surgical Correction

< 50 Minute Break >

5 Minutes - Nose Difficulties

Warning Graphic Surgical Photos
Scottie's Nose Cancer
Nose Difficulties
Nose Difficulties
Cancer Surgery

5 Minutes - Our Older Patients making eyewear more

comfortable for the aging population
Looking at new Styles
Making eyewear more comfortable for the aging population
Making eyewear more comfortable for the aging population

5 Minutes - A New Paradigm and Why

Wrapped Frames Lenses Evolve!
We are entering the future now
Freeform lens processing is addressing problematic lens distortions we have been dealing with since eyewear was first invented.
Some lens designers are calling this new technology "HD Vision" (High Definition)

Advanced Optics
Lenses & Aberrations
The Progressive Power Lens Visual
Challenges of PALs Distance
Intermediate
Near

10 Minutes - Lenses & Aberrations
Spherical Aberration
Distortion
Marginal Astigmatism
Coma
Lenses & Aberrations
Coma
Patient Parameters

5 Minutes - Understanding Measurements

Fitting Height
Fitting Height is the measurement from the center of the patient's pupil to the lowest point of the frame's eyewire in millimeters
Referred to as…
Fitting Height for PALs
Optical Center (OC Height) measurement for single vision wearers
Seg Height measurement for Bifocal vision wearers
PD
Pupillary Distance (PD) refers to the distance between the patient's pupils in millimeters

5 Minutes - What about all these NEW measurements?

Actually, measurements like Vertex, Pantoscopic Tilt and Wrap Angle (Position of Wear measurements) are not new
Lens designers have been using average or "default" values when creating a new lens for years
Now the ECP has the ability to take these measures for each patient individually – personalizing the product for that specific person
Vertex
Vertex is the distance between the back surface of the lens and the apex of the cornea.
Pantoscopic Tilt
Pantoscopic Tilt is the angle of the frame on the face in degrees Wrap
Angle
Wrap angle is the angle of the frame itself measured in degrees

5 Minutes - New Measurements Eye

Data
ERC (Eye Rotation Center)
Behavioral Data
Natural Head Posture (Head Cape)
Head/Eye Ratio
Stability Coefficient
Eye Rotation Center (ERC)
Eye Rotation Center (ERC) is the distance between the back of the lens and the point around which the eye rotates
The ERC can be different for each eye

Natural Head Posture
Natural Head Posture (Head Cape Angle) refers to how a patient's head rests naturally on the neck and shoulders. This has a direct impact on alignment of the design
H/E Ratio & Stability Coefficient
Some people move their head more to see things, while other people move their eyes more
The Head / Eye Ratio is a value that measures this
The Stability Coefficient determines how consistently the patient sticks to his or her H/E Ratio

5 Minutes - Taking Measurements Standard

Required Measurements
Frame Measurements
Fitting Height (Seg Height)
PD (Pupillary Distance)
Position of Wear Measurements
Pantoscopic Tilt
Wrap Angle
Vertex Distance
Behavior Measurements
ERC
Head Cape or Natural Head Position
H/E Ratio
Stability Coefficient

5 Minutes - Manual Measurements

Position of wear measurements can be taken either manually or digitally.
Varilux Patient Measuring Tool(LVAR200751)
Distometer
Machinist's Protractor
Frame Wrap Chart

Electronic Measurements
Zeiss I Terminal
The Smart Centration system from ABS, Inc., Smart Mirror
Hoya Spectangle
The Visioffice System

Bottom Line
It's all about focus
Experiment with different systems Settle
on a few good lens designs