BOARD FOR HEARING AID SPECIALISTS AND OPTICIANS

Members: Kristina Green, Kaytlyn Young, Darla All, Erik Meland, and Stacey Brayboy

I. CALL TO ORDER

II. EMERGENCY EVACUATION PROCEDURF®

II. APPROVAL OF AGENDA

1. Board **

- MERGENCY EVACUATION PROCEDURES

 PPROVAL OF AGENDA

 1. Board for Hearing Aid Specialists and Opticians Curriculum Review Committee Agenda, May 22, 2024

 BLIC COMMENT

 TCIAN CURRICULUM CRITTEE
- IV. PUBLIC COMMENT
- OPTICIAN CURRICULUM CRITERIA REVIEW

PERIMETER CENTER CONFERENCE CENTER EMERGENCY EVACUATION OF BOARD AND TRAINING ROOMS

(Script to be read at the beginning of each meeting.)

PLEASE LISTEN TO THE FOLLOWING INSTRUCTIONS ABOUT EXITING THE PREMISES IN THE EVENT OF AN EMERGENCY.

In the event of a fire or other emergency requiring the evacuation of the building, alarms will sound. When the alarms sound, <u>leave the room immediately</u>. Follow any instructions given by Security staff

Board Room 1

Exit the room using one of the doors at the back of the room. Upon exiting the room, turn **RIGHT.** Follow the corridor to the emergency exit at the end of the hall.

Upon exiting the building, proceed straight ahead through the parking lot to the fence at the end of the lot. Wait there for further instructions.

Board Room 2

Exit the room using one of the doors at the back of the room. (Point) Upon exiting the room, turn **RIGHT.** Follow the corridor to the emergency exit at the end of the hall.

Upon exiting the building, proceed straight ahead through the parking lot to the fence at the end of the lot. Wait there for further instructions.

You may also exit the room using the side door, turn **Right** out the door and make an immediate **Left**. Follow the corridor to the emergency exit at the end of the hall.

Upon exiting the building, proceed straight ahead through the parking lot to the fence at the end of the lot. Wait there for further instructions.

Board Rooms 3 and 4

Exit the room using one of the doors at the back of the room. Upon exiting the room, turn **RIGHT.** Follow the corridor to the emergency exit at the end of the hall.

Upon exiting the building, proceed straight ahead through the parking lot to the fence at the end of the lot. Wait there for further instructions.

Training Room 1

Exit the room using one of the doors at the back of the room. Upon exiting the room, turn **LEFT.** Follow the corridor to the emergency exit at the end of the hall.

Upon exiting the building, proceed straight ahead through the parking lot to the fence at the end of the lot. Wait there for further instructions.

Training Room 2

Exit the room using one of the doors at the back of the room. Upon exiting the doors, turn **LEFT.** Follow the corridor to the emergency exit at the end of the hall.

Upon exiting the building, proceed straight ahead through the parking lot to the fence at the end of the lot. Wait there for further instructions.

		on of official Board position
From: Williams Anna Sent: Wednesday, April 10, 2024 2:04 PM To: BCHOPLicensing (DPOR) <bchoplicensing@dpor.virginia instruction<="" re:="" related="" subject:="" technical="" th=""><th>a.gov></th><th>r Offical BO</th></bchoplicensing@dpor.virginia>	a.gov>	r Offical BO
Good afternoon,		⁷ 0,
am also including a snip of the ABO/NCLE Approval no	umbers and the links to our dasses.	Jed 25 16 2
	h. I. 3	
TitleX	ABO End Date NCLE End Dat ABO Approval NCLE Approval ADA Approval	
stablishing a Healthy Team Dynamic oundation of Ophthalmic Lens Power ENS STANDARDS AND FORMULAS	ABO End Date NCLE End Dat ABO Approval NCLE Approval AD Approval NCLE Ap	
Title LY Establishing a Healthy Team Dynamic Foundation of Ophthalmic Lens Power ENS STANDARDS AND FORMULAS ENSOMETRY Maintaining a Healthy Team DOLULAR ANATOMY AND ADVANCED OCUIAR ANATOMY Detimizing Manage of Vision Care Pediatric Dispensing	ABO End Date NCLE End Dat ABO Approved NCLE Approval AQA Approval AQA Approval 2/5/2027 2/5/2027 SWEGMEN B CWEGMOD PO 909-322 2/5/2027 5/WEGML22-1 CTWEGMOD 90-9075-22	

Links:

Establishing a Healthy Team Dynamic

ESTABLISHING A HEALTHY TEAM DYNAMIC - ABO - Leonardo (essiloriuxottica.com)

Foundation of Ophthalmic Lens Power
FOUNDATION OF OPHTHALMIC LENS POWER - ABO - Legnardo (essilorluxottica.com)

Lens Standards and Formulas

ABO - Leonardo (essilorluxottica.com) LENS STANDARDS AND FORMULAS Sign

Lensometry

LENSOMETRY - ABO - Leonardo (essiloriaxottica.com)

Maintaining a Healthy Team

MAINTAINING A HEALTHY TEAM ABO - Leonardo (essilorluxottica.com)

Ocular Anatomy and Advanced Ocular Anatomy

OCULAR ANATOMY - ABO - Leonardo (essilorluxottica.com)

Optimizing Managed Vision Care
OPTIMIZING MANAGED VISION CARE - ABO - Leonardo (essilorluxottica.com)

Pediatric Dispensing

PEDIATRIC DISPENSING-ABO - Leonardo (essilorluxottica.com)

Understanding Prismatic Effect

UNDERSTANDING PRISMATIC EFFECT - ABO - Leonardo (essilorluxottica.com)

Best Wishes and Warmest Regards, **Anna Williams**

Manager - Training and Development



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Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Sent: Tuesday, February 13, 2024 6:00 PM

To: Shoven Paige Subject: **ABO Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS EXAMINERS LEVEL 19 CONTACT LENS EXAMINERS CONTACT LENS 19 CONTAC

Dear Judith,

This letter will confirm that the American Board of Opticianry Education Committee approved the following online course:

Course: Establishing a Healthy Team Dynamic

Designation: Non-Ophthalmic

Course Number: SWEOA018

Expires: February 5, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

, scitica.com. You are necessing this amail because you submitted a course for approved global bands.

The standard of the course for approved global bands and the course global bands and the course gl

Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Sent: Tuesday, February 13, 2024 6:12 PM

To: Shoven Paige

Subject: **NCLE Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS THE CONTACT LENS EXAMINERS CONTACT LENS EXAMINERS CONTACT LENS 10 to 1

Dear Judith,

This letter will confirm that the National Contact Lens Examiners Education Committee approved the following online course:

Course: Establishing A Healthy Team Dynamic

Designation: Non-Ophthalmic

Course Number: CWEOA002

Expires: February 5, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

, scitica.com. You are necessing this amail because you submitted a course for approved global bands.

The standard of the course for approved global bands and the course global bands and the course gl

Establishing a Healthy Team Dynamic

1 hour non-ophthalmic ABO credit

Julation of Official Board position Abstract: The course covers three essential notions to establish a healthy team dynamic. First, how to set specific, measurable, attainable, and relevant goals. Second how to use different types of communication to build rapport. Finally, how to manage time effectively by communicating, organizing, and prioritizing.

Objectives:

- 1. To understand the importance of identifying and setting SMART goals.
- 2. To learn about effective time management techniques, managing your time effectively by communication g clearly, organizing and prioritizing your work, and controlling interruptions.
- 3. To learn about communication and identify the different communication types.
- 4. To be able to differentiate effective verbal and non-verbal communication techniques.
- 5. Learn to build rapport with colleagues and patients.

Time Outline

- ١.
 - - - 4. Relevant
 - చ్చ్ Time-Bound
 - b. Preparing and Action Plan
 - Create written SMART Goals
 - ii. Identify how to achieve your goals
 - Create a timeline
 - Determine resources needed
 - v. Execute the plan
 - c. What does it look like in real life?

Effective Time Management (20 mins)

- a. Top 4 time management practices
 - i. Manage your communication
 - 1. Listen Actively
 - 2. Maintain eye contact
 - 3. Paraphrase and check for understanding
 - 4. Ask questions

Goal Setting and Action Plans (15 mins)

a. Setting SMART Goals

i. Performance Goals

ii. Development Goals

iii. SMART Goals

1. Specific

2. Measurable

3. ^+**

- 5. Use Clarifying comments
- ii. Organize and Prioritize
- iii. Control Interruptions
- iv. Stop Procrastination in its tracks
- b. Tips to manage your time better
 - i. Prioritize your daily tasks
 - ii. Create a to-do list
 - iii. Ask for help
 - iv. Schedule time for interruptions
- c. Leverage practice management systems
 - i. Practice Management System (PMS)
 - 1. Schedule appointments
 - 2. Track resources
 - 3. Accounts Payable
 - 4. Accounts Receivable (the other AR)
 - 5. HIPPA information
 - 6. Product Orders
 - ii. Benefits of a PMS
 - 1. Marketing
 - 2. Billing/Estimates
 - 3. Scheduling
 - 4. HIPPA
 - 5. Insurance Benefits
 - 6. Tracking performance
 - iii. Limitations of practice management systems
- Effective Communication skills (20 mins) III.
 - a. The importance of effective communication skills
 - i. Why is it important?
 - ii. Communication and the professional
 - b. Non Verbal and verbal communication
 - i. Verbal communication
 - ii. Non Verbal Communication
 - يزنايَّ Reflection on your own styles
 - - i. Tips to being a good listener
 - ii. Handling feedback effectively
- Reflection

 Reflection

 Istening effectively

 i. Tips to being

 ii. Handling fee

 IV. Avoiding Miscommunication

 a. Understand why it have

 b. Negative and reflectively

 Individuals of the property of the p
 - Understand why it happened and how to prevent miscommunication.
 - b. Negative and positive words

date not to be construed as regulation or officeal Board position

Test Questions

Topic	(Goal Setti	ing			, B ⁰	
Screen ID			Tei	mplate	Multiple Choice with Single Correct Answer		
Screen Co	ontent					, o'll	
Title	Questio	n - 1					
Prompt	Select ti	he best an	swer the	en click S	Submit.	latio.	
Text	When	referring	to SMA	ART goa	als, identif	y the correct definition of the acronym SMART.	
Learner o	ptions					S	
		_		A S	Standard, N	Measurable, Attainable, Recordable, Time-bound	
Place an I			X	B	Specific, M	Ieasurable, Attainable, Relevant, Time-bound	
to the left correct a				C	Specific, M	Ioderated, Alterable, Referable, Traceable	
correct a	iisvvei (<i>3 j.</i>		D S	Strategic, Marketable, Achievable, Reusable, Training-based		
Delete unused choices and text.							
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Oraft, Draft Agenda

				o sition
Topic	Goal Settin	19		404
Screen ID		8	Template	Multiple Choice with Single Correct Answer
Screen Conten	t		<u> </u>	ic Co.
Title Quest	ion – 2			, Offi
Prompt Select	the best ansi	wer then	click Submit .	
Text Ident	ify the goal	that me	ets all the criteri	a for a SMART goal.
Learner option Place an X in the to the left of the correct answer Delete unused and text.	ne box e ·(s).		employee I will redu i. Run ii. Invi iii. Enh iv. Incr v. Setti expectatio I will redu I will incre quarters. I i. Incre ii. Rew iii. And iv. Run	te to get promoted to be a Store Manager. When I become a Store Manager, I would increase satisfaction. ce the attrition rates of the Store Staff by: ning a Rewards and Recognition program ting greater participation from the employees for leadership decisions nancing the training programs and increasing employee responsibilities reasing the scope for flexible work timings ing clear expectations from the individual roles and fine tuning the roles to meet the employee ns wherever possible ce the wait time at the Cash Counter in the peak hours by 2 minutes. case the quarterly sales of the store by 10% (over the same period last year) for the next two will do this by: casing the Sales Targets of the Dispensers correspondingly varding and recognizing good performance nouncing schemes and rebates on the dead stock nning promotion campaigns oduring a special economy range for the economy-minded people

Programming Instructions/ System Response

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Screen Co	Screen Content									
Title	Question - 3									
Prompt	Prompt Select the best answer(s) then click Submit.									
Text	Which of	the fol	llowing	attributes m	ke a SMART goal?					
Learner o	ptions				.0,0					
				A The g	als should be kept simple and not very challenging					
		n the box	X	B The p	rson should know how (s)he is going to make the goal happen					
to the left				C The g	al should have at least one of the 5 SMART (Specific, Measurable, Attainable, Relevant, or Time-					
Correcta	iisvvei (s)	•		bound	attributes					
Delete un	used cho	oices		D The g	al should be ambiguous					
and text.										
Programi	ming Inst	ructio	ns/ Sys	stem Resp	nse Move to next frame					

Topic	Goal Set	al Setting									
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Title Q	Question 4	estion 4									
Promp S	Select the best answer then click Submit .										
Text Id	dentify the re	levant <mark>SMA</mark>	RT goal for an	an experienced Dispenser from the list below.							
Learner options Place an X in the box to the left of the correct answer(s). Delete unused choices and text.		A B X C	staff. Learn enough dentify the those proble	he capability of servicing all the customer requests by myself without the support of dispensary ugh through my work as a Dispenser to become a doctor are 5 most frequently faced problems that the customers face with the frames, and learn to fix olems in the next 2 months. In depth a dispensary business plan for next year.							
Learner Ac	×ô	rner Feed	back	Programming Instructions/ System Response							
	6A	Corre	ct. Click NEX	XT to continue. Click NEXT and branch to next page							

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Topic	Go	al Setti	ng			760		
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Screen Cor	ntent					OK.		
Title (Question	ı — 5			1/1	OK.		
t	Select the	e best a	answei	r(s) then click Subm i	t.			
Text	Which of	f the fo	llowi	ng is an example of S	ending and Receiving forms of communication?			
Place an X in the box to the left of the correct answer(s). Delete unused choices and text.			X	A Comprehensi B Conveyance C Building of ra D Reporting of	of messages pport			
Learner Ac		Lear	ner F	eedback	Orall cional ada	Programming Instructions/ System Response		
Click all answe	ers then	CA	C	Correct. Click NEXT	to continue.	Click NEXT and branch to next page		
click Submit.	click Submit.		It	ncorrect. Click NEX	T to continue.	Show ticks and crosses next to option. Click NEXT and branch to next page		
Topic	Ef	ffectiv	e Com	munication Skills				
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Screen Cor	ntent			C ²	2			
Title	Questior	1 - 6		406				
Prompt	Select th	e best	answe	er then click Submit .				
				(A)	egarding formal communication?			
Learner op								

Formal communication promotes friendliness and openness in the dispensary

You use formal communication when conversing with colleagues in the dispensary

Use formal communication whenever you are in doubt about your relationship with another person

You use formal communication while conversing with regular patients

Delete unused choices and text.

Place an X in the box

to the left of the

correct answer(s).

B

 \mathbf{C}

D

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Topic	E	Effective	Comm	unica	tion Skills		, 003			
Screen ID					emplate	Multiple Choice with Multiple Correct	Answers			
Learner Act	tion	Lea	rner Fo	eedb	ack		Programming Instruction System Response	s/		
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Title	Question	n - 7					700			
Prompt S	Select th	ne best an	swer the	en clic	k Submit.		*(UE			
Text V	Which	informal	comm	unica	tion rule is o	ften forgotten but is invaluable when cor	inunicating with patients in the dispensary?			
Learner op	tions									
D/ V	• ••.			A	Use of firs	*C				
Place an X i		DOX		В		r and sensitivity to individual customers				
correct ans		s),		C		s of discussion to business topics only				
			X	D	Use of non	verbal communication				
Delete unused choices										
and text.	and text.									
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<u> </u>	ning instructions	, System Respons	e Move to next trame
			FOL DEG.
opic	Conflict in the	ne Dispensary	
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creen Co	ntent (Text may	be limited.)	
Title	Question 8	-00	
Prompt	Select the best answ	wer then click Submit	. .
Text	inform	ation accompanies wo	ords and communicates feeling and emotions through techniques such as intonation or body
	language.	90	
	language.	Tillis	

Topic	Conflict i	n the l	Dispe	ensary	180
Screen ID				Template	Multiple Choice with Single Correct Answer
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Place an X in the box to the left of the correct answer.			Α	Qualifying	
			В	Quality	
		X	С	Qualitative	9
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and text.					(e)
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Effe	Effective Time Management								
Screen ID Multiple Choice with Single Correct Answer									
Screen Content (Text may be limited.)									
Title Question 9	tion 9								
Prompt Select the b	mpt Select the best answer then click Submit .								
Text Which of the	e fo	llowin	g is N	OT an effecti	ive time management technique?				
Learner options					Ore in our off				
			Α	Organizing work					
Place an X in the box			В	Prioritizing	work get a second and a second				
to the left of the correct answer.		X	C	Procrastina	ting of the state				
correct answer.			D	Using "To I	Do" Lists				
Delete unused choice	es		E Managing interruptions						
and text.					g d t t				
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T	opic	Effective Time Management							
S	creen II	Template Multiple Choice with Single Correct Answer							
S	creen Co	ontent (Text may be limited.)							
	Title	Question 10 trib							
	Prompt	Select the best answer then click Submit .							
	Text	Which of the following is a category to which you can assign tasks while prioritizing a "To-Do" List?							

Topic	Effective	Time	Mana	agement		760,
Screen ID			-	Template	Multiple Choice with Single Correct Answer	ako .
Learner option	15					\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
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Title	Questio	on 11	_		•	780 3 CO.		
Prompt	Select	the best a	best answer then click Submit .					
Text	Which	of the fo	llowin	g is th	e best way to	communicate effectively and better manage your time		
Learner o	ptions					Ore in ore		
		_		Α	Set expecta	ations and meet them to build trust		
Place an X			X	В	Listen activ	vely to your co-workers, managers, and patients to allow for clear communication and sharing		
to the left					of expectat	tions (A)		
correct at	iiswei.			C	Paraphrase	and check for understanding		
Delete un	Delete unused cho			D	Use clarify	ing comments to avoid miscommunication and resulting rework		
and text.								
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T	opic	Effective Time Management						
S	creen II	Multiple Choice with Single Correct Answer						
S	creen Co	ent (Text may be limited.)						
	Title	stion 12						
	Prompt	ct the best answer then click Submit .						
	Text	tt is one way you can manage interruptions effectively?						

Topic	Effective	ve Time Management					
Screen ID			Template	Multiple Choice with Single Correct Answer			
Learner option	S						
	_	X	A Schedule	two or three times in a day for checking emails.			
Place an X in th			B Avoid con	ntact with colleagues			
to the left of the correct answer			C Don't retu	irn phone calls			
correct answer	•		D Avoid con	ntact with patients			
Delete unused	choices		E All of the	above			
and text.			<u> </u>	√S _S			
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Topic	Effective	Time I	Management	70 VO			

Topic	e Time	Time Management					
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Title Q	uestion 13				Olype of se		
Prompt Se	elect the best	answer	· then c	lick Submit .	CIEST MENT		
Text W	Vhich categor	y of pri	oritiza	tion is the or	e you should address first?		
Learner opt	tions	tol Ole					
			A Not urgent and not important				
Place an X in	of the		В	Urgent and	Notimportant		
to the left o		X	C	Urgent and	Important		
correct aris			D	Not urgent and Important			
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and text.				ale t			
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Topic	Effective Time Management						
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Screen Conten	Screen Content (Text may be limited.)						
Title Ques	tion 14						

					Sition Significant Control of the Co			
Topic	Ppic Effective Time Management							
Screen II	D	Template Multiple Choice with Single Correct Answer						
Prompt				ien click Subm				
Text	There a	are many	reasons	people procras	tinate. They don't like the task at hand or are not sure how to do a task. What is the best way to			
	keep fr	om proci	astinatio	on?				
Learner o	options							
_,				A Delegate	your work to others			
Place an I				B Ignore it,	it will be there later			
correct a			X	C Just get s	Just get started			
correct a	iiswei.			D None of	he above			
Delete un	nused cl	hoices			x/J/V			
and text.				•	const			
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Topic	H	Effective	Time M	ime Management				
Screen II	D			Template Multiple Choice with Single Correct Answer				

Topic	Time	Mana	gement			
Screen ID		Template Multiple Choice with Single Correct Answer				
Screen Content	(Text ma	ay be	limit	ed.)		
Title Questi	on 15			Ore fine app		
Prompt Select	the best a	nswer	then o	elick Submit.		
Text The be	est time to	create	e your	"To Do" list is		
Learner options			1 .			
Dia a a a v V in the	- l	A At the beginning of your work shift				
Place an X in the to the left of the		X	B Before you leave your shift each day create the next days list			
			C	At the beginning of each week		
correct answer.	•		D	Whenever you want to do it		
Delete unused c	hoices					
and text.				90 m		
Programming Ir	nstructio	ns/ S	yster	n Response Move to next frame		
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'	Topic	Effective Time Ma	Effective Time Management							
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	Title	COLL								

Topic	Effective Time	e Management	7 60
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Learner options			
		A	20:
Place an X in th			
to the left of the correct answer.		С	.000
Correct ariswer.		D	25
Delete unused o	choices		200
and text.			Ethile
Programming I	nstructions/	System Respons	e Move to next frame

Topic Goal Setting Screen ID **Template** Multiple Choice with Single Correct Answer Screen Content (Text may be limited.) Title Ouestion 16 **Prompt** Select the best answer then click **Submit**. What part of a SMART needs to be described and provided in the following goal? Text I will successfully manage the frame inventory to allow for a better patient experience. **Learner options** Specific Place an X in the box В Relevant to the left of the Time-bound correct answer. D Attainable Delete unused choices and text. **Programming Instructions/ System Response** Move to next frame

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Topic		Conflict i	n the I	Disper	nsary	760			
Screen II	D			T	emplate	Multiple Choice with Single Correct Answer			
Screen Co	Screen Content (Text may be limited.)								
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Prompt Select the best answer then click Submit.									
Text	In a co	nflict, it i	s impo	rtant	to be	ajiot.			
Learner	ptions					dill's			
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correct a			X	C	Assertive				
				D	Manipulati	ve sti			
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Topic Effective Time Management						ing Mg			

Topic	Effec	tive Time	Che Ma					
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Screen Co	Screen Content (Text may be limited.)							
Title	Question 18	}		.'C3				
Prompt	Prompt Select the best answer then click Submit.							
Text	When there	is simply	too much to do, w	hat should you do?				
Learner o	ptions		O _{to} ,					
			A Just finish	what tasks you can, the rest can wait.				
	(in the box	X	B Ask for he	elp from your co-workers				
to the left correct an			C Decline U	rgent and Important requests until you are caught up.				
correct ar	is wei .		Go home	early				
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Topic		Effective	Time	Mana	agement	760			
Screen ID					Template	Multiple Choice with Single Correct Answer			
Screen (Screen Content (Text may be limited.)								
Title	e Question 19								
Prompt Select the best answer then click Submit.									
Text	Whic	ch category	of pri	oritiz	ation should y	vou avoid?			
Learner	option	ıs				aulo			
_,	25.5			A	Not urgent	and not important			
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and text.					No.				
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Topic Effective Time Management Screen ID Template Multiple Choice with Single Correct Answer Screen Content (Text may be limited.) O) Title Ouestion 20 **Prompt** Select the best answer then click **Submit**. Which of the following is NOT one of the 5 aspects that can hinder your productivity at work? **Text Learner options** Lack of Prioritization Place an X in the box В Procrastination to the left of the Lack of to-do lists correct answer. **D**(2) Clear Communication Delete unused choices and text.

Move to next frame

Programming Instructions/ System Response

Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Sent: Tuesday, February 13, 2024 6:02 PM

To: Shoven Paige Subject: **ABO Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS

217 N. Upper Street, Suite 201

Lexington, KY 40507

703-719-5800 • 800-296.

Dear Walter,

This letter will confirm that the American Board of Opticianry Education Committee approved the following online course:

Course: Foundations for An Ophthalmic Lens

Designation: Ophthalmic Level I

Course Number: STWEOA122-1

Expires: February 5, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

, scitica.com. You are necessing this amail because you submitted a course for approved global bands.

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To Whom It May Concern,

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Foundations of Ophthalmic Lens Power

Sincerely,

Brooks K Carrasco

Brooke Carrasco, ABOC, NCLE

To Whom It May Concern,

I certify that I have completed the following course in no less than the number of credit hours (1) requested for approval.

Foundations of Ophthalmic Lens Power

Paige Shoven

Paige Shoven, M.Ed, ABOC

Date: 3/4/2022	osition of the state of the sta
To Whom It May Concern,	c.cal Board Pc
I,Walter "Pete" Hanlin	do certify that I am the author of the following
Continuing Education credit that is b	eing submitted to the American Board of Opticianry for
consideration of approval.	do certify that I am the author of the following being submitted to the American Board of Opticianry for
CE02 – Foundation of Ophthalmic Lens Power	
Best regards,	rdenda die notto be
Tand	Oraft has graft Agenda
oroposed to pic	do certify that I am the author of the following speing submitted to the American Board of Opticianty for mic Lens Power Draft Aderida and Alexandra and Al
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CEC: FOUNDATION OF OPHTHALMIC LENS POWER

FOUNDATION OF OPHTHALMIC LENS POWER covers the following three areas:

- calculate focal length.

 Vertex Distance and Vertex Compensation: explains the concept of vertex compensation and how to consider this factor when fitting a patient's eye wear. explains the concept of vertex Compensation and how to consider this factor when fitting a patient's eye wear. explains the concept of vertex compensation and how to consider this factor when fitting a patient's eye wear. explains the concept of vertex compensation and Spectacle Lenses: explains how under create vision problems. It also identify knowledge of the 1)
- 2)
- 3) to be constitued as reguli knowledge of these elements to balance magnification in a lens.

Course outline/timing:

Focal Length of a Spectacle Lens (20 minutes)

- 1) **Course Objectives**
 - a) Define "focal length"
 - b) Explain the concept of focal length and its relationship to dioptric power
 - c) Explain the difference between a real and a virtual focal point
 - d) Determine dioptric power if given focal length
 - e) Determine the focal length if given the dioptric power
- **Defining Focal Length** 2)
 - a) Plus Lenses Parallel rays of light converge to a real image at the focal point of the lens
 - b) Minus Lenses Virtual focal point is determined by tracing the diverging rays backwards
- Focal Length and Dioptric Power
 - Plus Lens Real focal point
 - Minus Lens Virtual focal point b)
 - Focal Length formula
 - Chart reflecting overall lens power and focal length
- Key Takeaways
 - The focal length of a lens is a measurement of how strongly it converges (focuses) or diverges (diffuses) light.
 - A plus lens will make parallel rays of light converge to a real image at the focal point of the lens. The focal length is also called the back vertex focal length.
 - For a minus lens, the virtual focal point is determined by tracing the diverging rays backwards. The distance from the lens to the virtual focal point is also called the front vertex focal length.
 - d) If you are given the power of a lens, you can compute the focal length. Similarly, if you are given the focal length of a lens, you can compute the lens power.
 - e) The lens power is equal to the reciprocal of the focal length measured in meters.

Vertex Distance and Vertex Compensation (15 minutes)

- 1) Course Objectives
 - a) Understand vertex distance
 - b) Explain vertex compensation
 - c) Define the essentials of vertex effect
 - d) Arrange the variables into the framework of the formula
 - e) Use the formula to compute the compensated lens power
- 2) Vertex Overview
 - a) Vertex Distance Definition
 - b) Describing a Cylinder lens
 - c) When is Vertex Compensation necessary?
- 3) Vertex Compensation Formula
 - a) Vertex Effect chart
 - b) Vertex Compensation formula examples
- 4) Key Takeaways
- kto be construed as regulation or officeal Board position of officeal Board position a) The vertex distance is the distance between the back surface of a corrective lens and the front of the cornea.
 - b) All lenses have two dioptric power values. One is the actual power which may be measured in a lensometer, and the other is the effect power that only the wearer perceives.
 - c) Vertex compensation enables the optician who notes differences between the examined and fitting vertices to adjust the lens power in the worn lenses to match the value of the examined power.
 - d) Whenever any lens is moved farther or closer in the fit than where it was examined, the perceived power of the lens changes. In lenses with powers less than 6.50 diopters, this change is usually not significant, but in lenses above 6.50 diopters, wearers will usually notice a difference.
 - e) To calculate the necessary compensation in power, you must:
 - first calculate the amount of compensation necessary per millimeter of displacement. It is
 - g) then multiply that number by the exact number of millimeters of displacement between

g) then multiply that number by the exact numb the examination vertex and the fitting vertex

Magnification and Spectacle Lenses (30 minutes)

- 1) Course Objectives
 - a) Explain what magnification is and its effect on vision
 - b) Understand the causes of magnification
- k to be construed as regulation or office al Board position c) Learn the magnification formula to calculate the amount of magnification in a lens
 - d) Manage the variables of lens design to balance magnification between lenses
- What is Magnification? 2)
 - a) Magnification
 - b) Minification
 - c) Condition called aniseikonia,
- 3) The Magnification Formula
 - a) Magnification Formula
 - b) Shape Factor/Index of Refraction
 - c) Power Factor
 - d) Design Variable chart
 - e) Contact Lenses are worn with no Vertex Distance
- Managing Variables to Impact Magnification 4)
 - a) Base Example High Plus Lens with Standard Variables
 - b) Examples: Lowering the Base Curve leads to lower magnification
 - c) Examples: Decreasing the center thickness leads to further decrease
 - d) Examples: Decreasing the vertex distance lowers magnification further.
 - e) Examples: Increasing the Refractive Index decreases magnification.
- 5) **Key Takeaways:**
 - The elements of lens design which influence magnification are: base curve, thickness, vertex, and index of refraction
 - There are several methods for adjusting these three elements in order to create binocular harmony
 - The magnification formula can be used to determine the total amount of magnification difference between the eyes
 - The magnification formula can be used as a predictor of how design changes will solve the problem of magnification imbalance



- 3. Balancing Prescribed Prism: explains the difference between prescribed prism and induced prism and the purpose of balancing prism. It also provides the rules for canceling, compounding, and balancing prism

Let's get right into it with our first lesson on Understanding Prism in a Prescription. At the end of this course, you will be able to:

- 1. Describe the two types of prism (prescribed and induced) that can exist in a prescription
- 2. Explain the base direction of any existing prescription
- 3. Use the lensometer to identify the amount and base direction of prism in a lens Identify common problems unwanted and induced prism can cause for the patient
- Waterials contained 4. Follow industry protocol for reordering lenses exceeding prism tolerances



Welcome to the lesson on understanding prescribed and induced prisms. At the end of this course, you will be able to:

- Describe the two types of prism (prescribed and induced) that can exist in a prescription
- Explain the base direction of any existing prescription
- Use the lensometer to identify the amount and base direction of prism in a lens
- Identify common problems unwanted and induced prism can cause for the patient
- Follow industry protocol for reordering lenses exceeding prism tolerances

Naterials contained in this agenda are proposed to

VISUALIZING PRISM IN A LENS

offical Board position PRISMS ARE THE BUILDING BLOCK OF LENSES ARE ARRANGED, A PLUS OR MINUS LENS WILL RESULT

IN A SIMPLISTIC VIEW, DEPENDING UPON HOW THE PRISMS



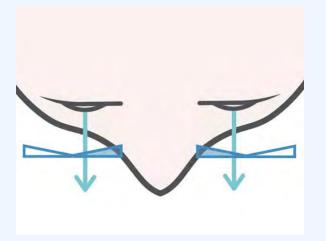


THE OPTICAL CENTER OF A LENS IS THE GENTRAL POINT THROUGH WHICH LIGHT MAY PASS WITHOUT BEING DEVIATED

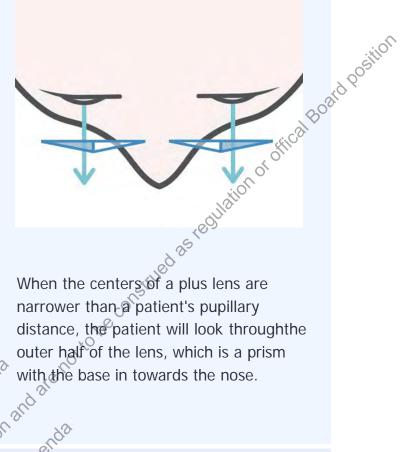
The optical center occurs at the point where both prisms meet in a lens. In a plus lens, the optical center is the point where the prisms meet base to base. In a minus lens, the optical center is the point where the prisms meet apex to apex. Since light always bends towards the harmonic meet apex to apex. is the point where the prisms meet base to base. In a minus lens, the optical center is the point where the

> When the optical centers match the location of the patient's center pupil, there is no prism of any sort. Anytime lenses are ground to situate the centers away from the center pupil, prismatic effect will result. The half of the lens through which the patient views is a prism with a base direction of in, out, up, or down.

BASE IN PRISM

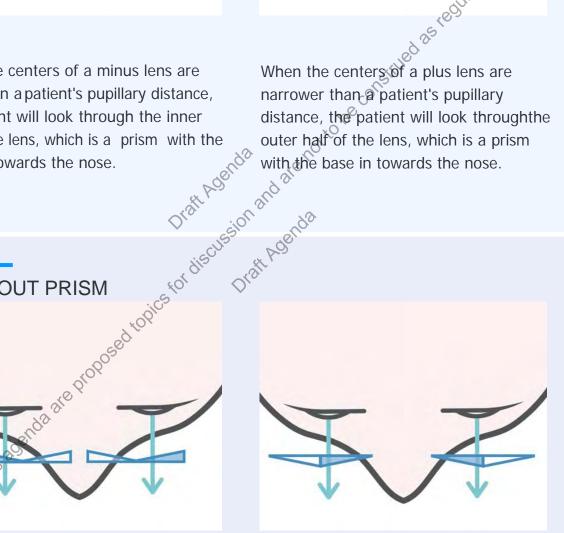


When the centers of a minus lens are wider than a patient's pupillary distance, the patient will look through the inner half of the lens, which is a prism with the base in towards the nose.



BASE OUT PRISM

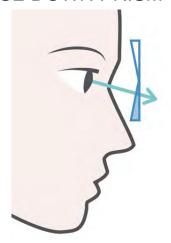
When the centers of a minus lens are narrower than a patient's pupillary distance, the patient will look through the outer half of the lens, which is a prism with the base out towards the ear.



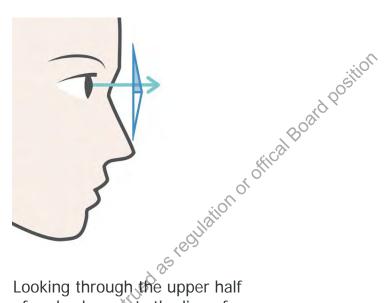
When the centers of a plus lens are wider than a patient's pupillary distance, the patient will look through the inner half of the lens, which is a prism with the base out towards the ear.

Materials contained

BASE DOWN PRISM



Looking through the lower half of a minus lens puts the line of sight through the half of the lens that is a prism with its base down from the line of sight.



Looking through the upper half of a plus lens puts the line of lens that is a prism with its base

BASE UP PRISM

Eooking through the upper half of a minus lens puts the line of sight through the half of lens that is a probase of lens t

Just lens puts the upper plus lens puts the line sight through the half of the lens that is a prism with its be down from the line of sight.

Looking through thelower half of a plus lens puts the line of sight through the half of the lens that is a prism with its base up from the line of sight.

CHECKING PRISM WITH A LENSOMETER

regulation of official Board position USING A LENSOMETER WILL HELP YOU TO IDENTIFY THE AMOUNT OF PRISM AND THE BASE DIRECTION OF PRISM IN A LENS

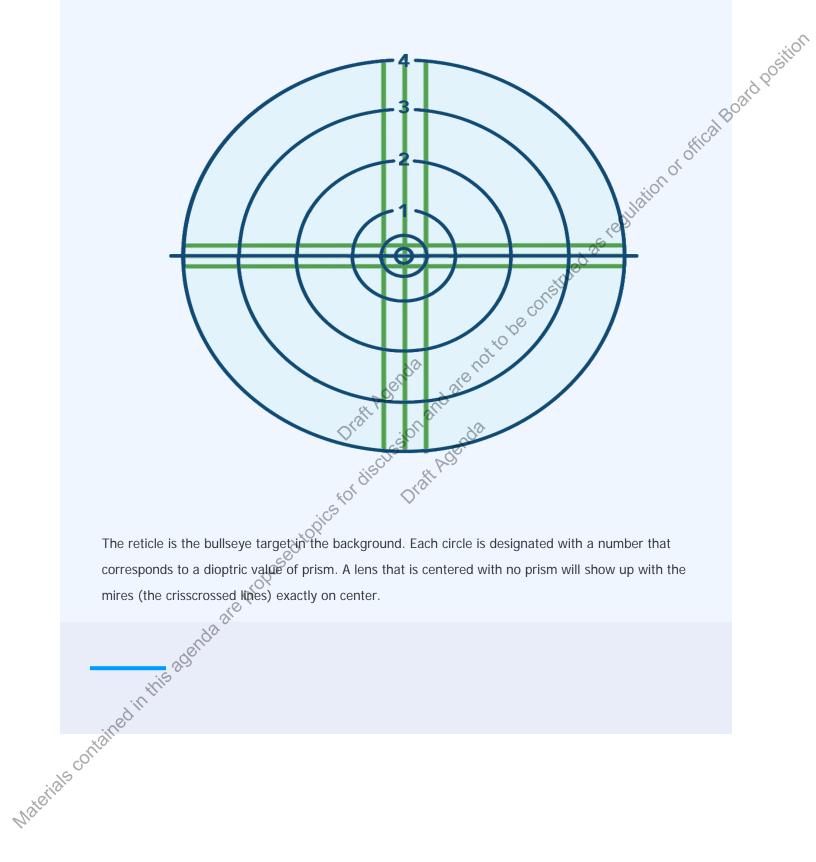
READING PRESCRIBED PRISM

Place each lens into the lensometer, one at a time. Be careful to situate the center of the target over the reticle at the point that represents the amount and direction of the prescribed prism.

- Spot each lens at the center of the reticle.
- Materials contained Measure the distance between the dots. If this distance between the dots equals the patient's pupillary distance, then the prism has been centered correctly.

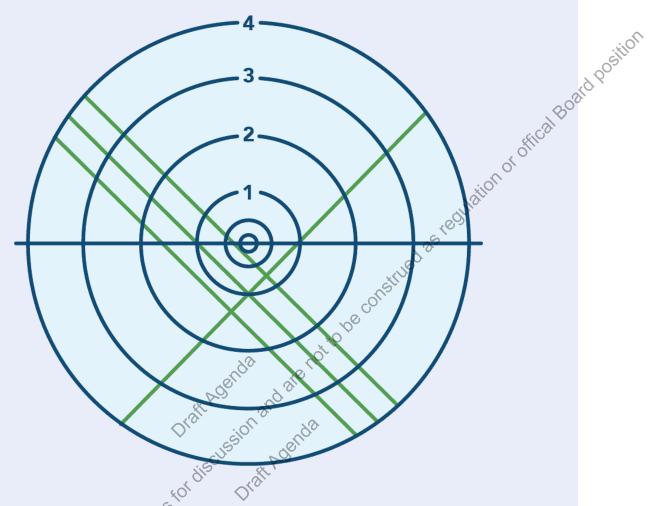
- or offical Board position With a marking pen, dot where the centers should have been surfaced to line up over the pupils. You can have the patient wear their eyewear and place a dot in front of each pupil

NO PRISM AT THE OPTICAL CENTER



corresponds to a dioptric value of prism. A lens that is centered with no prism will show up with the

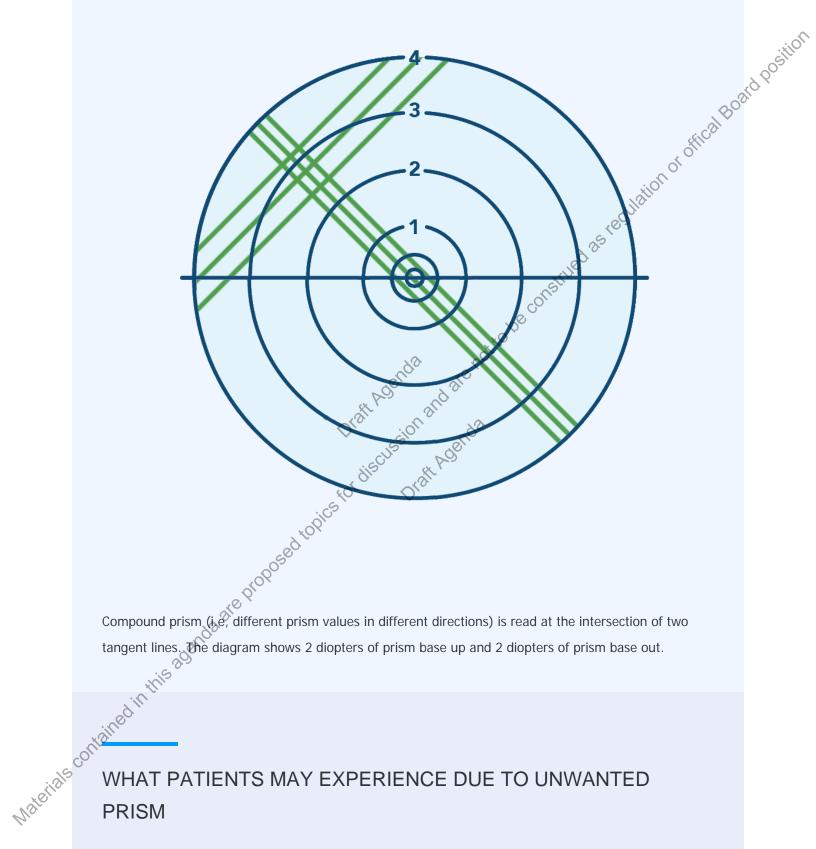
READING PRISM ON A LENSOMETER



A lens that is spotted with the patient's pupillary distance and reads as the diagram to the left, indicates that the lens will generate a 1 diopter prism down.

In some cases a doctor will write a prism prescription calling for the use of different prism values in different directions. To verify the presence of the prescribed prism, the lens should be spotted at the patient's pupillary distance. The target should be displaced at that point. Read the position of the target by locating the center of the target as the intersection of the two directional tangent values.

Waterials contained in



Direction of unwanted prism	Visual effect	Patient experience
Excessive base down prism	Floor (Horizontal) seems concave	Standing in the bottom of a bowl
Excessive base down prism	The horizon is displaced upward	Walking uphilk of Office
Excessive base up prism	Floor (Horizontal) seems convex	Standing on top of a hill
Excessive base up prism	The horizon is displaced downward	Walking downhill
Excessive base inor out prism	Horizon seems high toward base or/low toward apex	The floor seems tilted

INDUSTRY PROTOCOL FOR REORDERING LENSES EXCEEDING PRISM TOLERANCES

The performance for prismatic effect. According to ANSI 2005 standards, induced and diopters per pair horizontally or 0.33 diopters. Upon inspection, lenses not meeting industry standards should be returned to the lab from which the industry tolerance for prismatic effect. According to ANSI 2005 standards, induced prism beyond 0.66

The amount of excessive prism should be noted and identified for each eye. This will eliminate guesswork and help the lab to identify the nature of the error. With specific data the lab will be able to process the new lenses quickly and efficiently.

In a progressive lens, prism should not be measured at the distance verification circle. Prism should be measured at the primary reference point (PRP), which is the dot below the fitting crossive the optical center of a progressive lens. Draft Agentia Agentia age proposed topics for discussion and are not to be constituted.

Draft Agentia The agentia age proposed topics for discussion and are not to be constituted. The proposed topics for discussion and are not to be constituted. The proposed topics for discussion and are not to be constituted. The proposed topics for discussion and are not to be constituted. The proposed topics for discussion and are not to be constituted. The proposed topics for discussion and are not to be constituted. The proposed topics for discussion and are not to be constituted.

KEY TAKEAWAYS

To describe the two types of prism (Prescribed and Induced) that can exist in a prescription

w to explain the base direction of any existing the control of Congratulations! You have completed the "Understanding prism in a prescription" lesson. In this course you learned: How to explain the base direction of any existing prescription

How to explain the base direction of any existing prescription ...y common problems, unwanted and induced prism can cause for the patier.

To when tify common problems, unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for the patient unwanted and induced prism can cause for

Jon on understanding lens power and prismatic effect. It this course, you will be able to: Visualize all lenses as a combination of prisms Describe lens power in both spherical and cylindrical lenses Transpose any cylinder prescription into either plus of mire Find the power of any lens in the two major ma UNDERSTANDING LENS POWER AND PRISMATIC

Welcome to the lesson on understanding lens power and prismatic effect. At the end of this course, you will be able to:

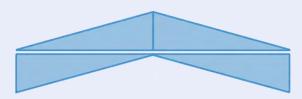
- Impute are proposed topics for dispersion was also proposed topics for dispersion with the agenda are proposed topics for dispersion was also proposed topics for dispersion with the agenda are proposed topics for dispersion was also proposed topics for dispersion with the agent are proposed topics for dispersion with the agent are proposed topics for dispersion with the agent are proposed topics.

SPHERICAL AND CYLINDRICAL LENSES

as regulation of offical Board position THE TOTAL POWER OF A LENS IS THE EQUAL TO THE COMBINATION OF THE FRONT CURVE AND BACK CURVE **POWERS** LENS POWERS IN SPHERES: A spherical lens is formed when a front curve of singular dioptric power is combined with a back curve of singular.

Convex front surface

Front curvatures are usually convex and are referred to as plus powers.



Concave back surface

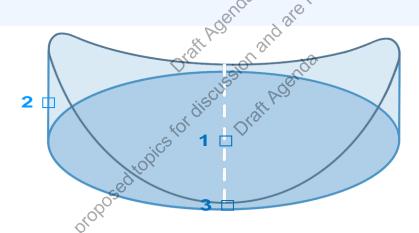
Back curvatures are usually concave and are referred to as minus powers.

*In order to derive lens power, you must use a lens clock to read the power of the front curve and add it to the power of the back curve. The resulting value is the lens power.

DESCRIBING A CYLINDER LENS

- Unlike a sphere, which has only one power, a cylindrical lens has two separate meridians of power between the strongest power is called the "major" meridian with the strongest power is called the "major" meridian was called the "minor" meridian The
- The meridians falling between the major and the minor meridians will have bowers which fall between
- the strongest and weakest powers

 By definition, the cylindrical power of the lens is the difference between the major and minor meridians



1. Cylinder axis

The axis indicates the angle between the two meridians of astigmatism. The axis is expressed in degrees.

2. Maximum edge thickness

A cylinder lens will be the thickest at major meridian. This area occurs at a 90 degrees angle from the cylinder axis

The cylinder lens will be the thinnest at the cylinder axis.

EVERY CYLINDER LENS CAN BE DESIGNATED IN TWO WAYS

It is important to note that the same lens can be designated in two ways without changing the actual power of the cylinder lens. The two forms of a cylinder lens are known as "plus cylinder form" and "minus cylinder form".

The process of switching from one form to another is called transposition. The rules of transposition are as follows:

- add cylinder to sphere
- 2 change sign of cylinder
- shift axis by 90 degrees by adding 90 to an axis of 90° or less, or subtracting 90 from an axis of 91° or greater

Using these three steps, we will transpose the following prescription from plus to minus cylinder form:

Sphere	Cylinder day	Axis
+3.00	disci+1.00 Agent	90

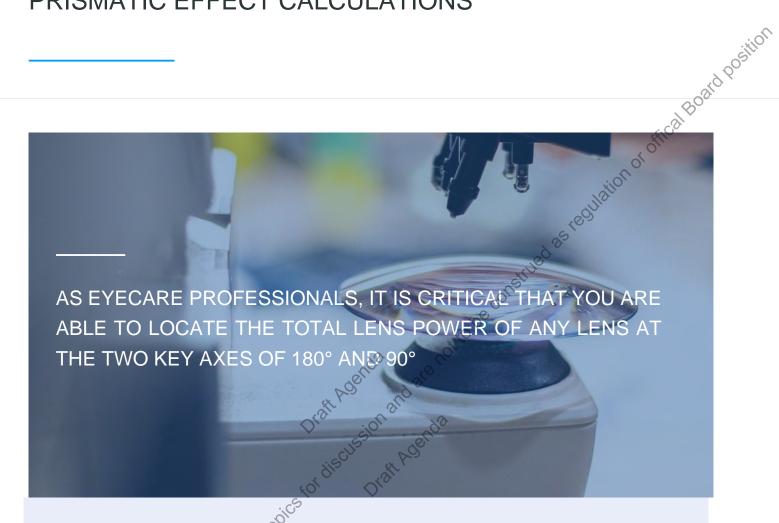
- Add cylinder to sphere: +3.00 + 1.00 = +4.00, when the prescription is written in minus cylinder form, +4.00 will be the first number
- Change sign of cylinder: +1.00 was the cylinder power in plus cylinder form. Therefore, we change it to -1.00, which is the second number in the minus cylinder form
- Shift axis by 90 degrees: 90° was the axis in the plus cylinder form. Following the rules, we add 90° to it, resulting in 180°, which is the last number in the minus cylinder form

Once transposed, the prescription is written as:

Sphere	Cylinder	Axis
+4.00	-1.00	180

Both of the designations, while looking different, actually represent the same lens powe

PRISMATIC EFFECT CALCULATIONS



THE POWERS IN THESE TWO MERIDIANS ARE ESSENTIAL TO PRISMATIC EFFECT CALCULATIONS

With the prismatic effect calculations, you can determine the quality and efficiency of any lens.

• Axis 180°: when the placement of the optical centers varies from the patient's pupillary distance, prism is introduced. The distance the centers are off, and the lens power at axis 180°, are critical variables in the Prentice rule formula which is used to determine whether the lenses meet industry tolerances or not.

Axis 90°: when lens power varies from eye to eye, it is necessary to note the variation in the 90 degree meridian. Power discrepancies in the 90 degree meridian will lead to prismatic imbalances at the reading level. The lens power at axis 90° along with the reading depth are critical variables in the Prentice rule formula which will be used to correct prismatic imbalances at near points

Mater

RESOLVING POWER WITH AXES OF 180° OR 90°: ALL OR NOTHING

- o Axis 180°: if the axis is written as 180° then no cylinder exists at 180°. The power of that lens at
- Axis 90°: if the axis is written as 90°, then no cylinder exists at 90°. The power of that lens at 90° is the sphere power only, while at 180° the power is all of the sphere and all of the cylinder added together.

RESOLVING POWER WITH AXES OF 45° OR 135°: HALF AND HAL

These are easy to resolve if you remember the definition of a cylinder. A cylinder has zero power along its axis, and 100% of its power 90 degrees away from its axis, and 50% of its power 45 degrees away from its axis.

Therefore, to calculate the power of a cylindrical lens with an axis at 45° or 135° in the vertical (90°) or horizontal (180°) meridians, simply add one half of the cylinder power to the sphere power (since 90° and 180° are both 45° degrees away from the axis of a lens having a cylinder axis of 45° or 135°).

For example, the Rx OD: -1.00 -3.00 x 045 will have -2.50 diopters of power in both the 90° and 180° meridians (because both of these meridians are 45 degrees away from the cylinder axis, simply add 1/2 the cylinder power to the sphere power to determine the power in those meridians).

RESOLVING POWER WITH OBLIQUE AXES: USE THE TABLE

When cylinder axes fall on other than 45°/90°/135°/180° the exact percentage of cylinder can be calculated using trigonometry, or by using the table below—as most of the industry does.

and add that to the sphere power for the total power. Find the closest value in either column A or B that best matches the distance from your axis of concern (180° or 90°) Use the percentage in that line to compute the amount of cylinder that will be present at your axis of concern

De	egrees from axis	Cylinder		
	0° or 180°	0%		Sition
	5° or 175°	1%	3031	392
	10° or 170°	3% Ot office		
	15° or 175°	7% adulation		
	20° or 160°	12% 75		
	25° or 155°	COL 18%		
	30° or 150°	25%		
	35° or 145°	7 and are		
	40° or 140°	A1%		
	45° or 135° oics for	Cylinder 0% 1% 1% 3% 7% 12% as actual attendance and are are another and are another are another are another are another are ano		
	50° or 130°C	59%		
	55° or 125°	67%		
is agenc	60° or 120°	75%		
red in th	65° or 115°	82%		
	70° or 110°	88%		
	75° or 105°	93%		

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Degrees from axis	Cylinder
80° or 100°	97%
85° or 95°	99%
90°	100%

Example: +2.00 - 1.00 X 35

- Solving a vertical imbalance problem, you are concerned with the power at 90°.
- Axis 35° is 55° degrees away from the axis which is at 90 degrees. Based on the line in the chart that starts with 55°, the lens would have 67% of the -1.00 cylinder at 90°.
- To calculate 67% of the lens power of -1.00, multiply the two numbers together: (67%) X (-1.00) = -0.67 diopters, which is the Cylinder lens power at axis 90°.
- Remember that sphere power is the same everywhere on the lens. To find the total lens power at 90°, we need to add the Sphere power to the Cylinder power, both at axis 90°.
- Sphere Power + Cylinder at 90° = Total power of the lens. In this case, (+2.00) + (-0.67) = (+1.37) diopters = Total power of the lens

THE PREMICE RULE FORMULA TRANSLATES VARIABLES INTO REAL OBJECTIVE VALUES OF PRISMATIC EFFECT

Using this formula, you will be able to translate variables such as lens power and distance in millimeters that real objective values of prismatic effect that can easily be judged with industry tolerances and evaluated to improve lens design.

Prismatic effect = (Distance in millimeters X Lens Power) / 10

The units of prismatic effect ar measured in diopters of prism.

Example:

OD +2.00-2.00 X 045 OS +1.00-0.50 X 090

The patient's pupillary distance is 64 mm (mono-PD of 32 mm in each eye)

The centers from the lab were ground at 68 mm (2.0 mm too wide in each eye)

Prismatic effect and direction in each lens:

- ffect and direction in each lens:

 OD (right): in order to use Prentice's formula, you need the lens power. Based on what you learnedearlier, you should be able to calculate the power at 180°, which is +1.00.
- OS (left): likewise, you should be able to calculate the power at 180°, which is +0.50.
- 0.20 diopters of prism base out OD: (2.0 mm x +1.00)/10 = 2/10
- OS: $(2.0 \text{ mm}) \times +0.50)/10 = 0.000$

Total prismatic effect: Out and Out compound, so this job generates 0.30 diopters of prism which is within industry tolerance. Industry standards are covered in a separate lesson in this course.

LATERAL PRISMATIC EFFECTS DUE TO CENTRATION ERRORS

Aligning the optical centers of the lenses with the patients' pupils will ensure there is no prismatic effect. However, misalignment will lead to lateral prismatic effects with base directions depending upon the power of the lens. Click on the markers below to learn more:

KEY TAKEAWAYS

In this lesson, you learned:

1

A spherical lens is formed when a front curve of singular dioptric power is combined with a back curve of singular dioptric value. The lens which results from that combination is spherical since it has only one overall dioptric power

2

only one overall dioptric power

In order to derive lens power, you must use a lens clock to read the power of the front curve and add it to the power of the back curve. The resulting value is the lens power

3

Unlike a sphere, which has only one power, a cylindrical lens has two separate meridians of power. The meridian with the strongest power is called the "major" meridian, and the meridian with the weakest power is called the "minor" meridian

4

The same lens can be designated in two ways without changing the actual power of the cylinder lens. The two forms of a cylinder lens are known as "plus cylinder form"

5 in thi

The process of switching from one form of cylinder to another is called transposition. The rules of transposition are as follows :

- add cylinder to sphere change sign of cylinder
- shift axis by 90 degrees by adding 90 to an axis of 90° or less, or subtracting 90 from an axis of 91° or
- greater

who the continue of the state o induced prismatic effect. Any misalignment will lead to induce prism. The direction of the base of the induced prism will depend on the type of lens (minus or plus power) and the direction of the



- The difference between prescribed prism and induced prism
 The purpose of balancing prescribed prism
 The rules of prism cancelling and compounding

escribed prism
we able to explain:

In prescribed prism and induct

Alancing prescribed prism
of prism cancelling and compounding

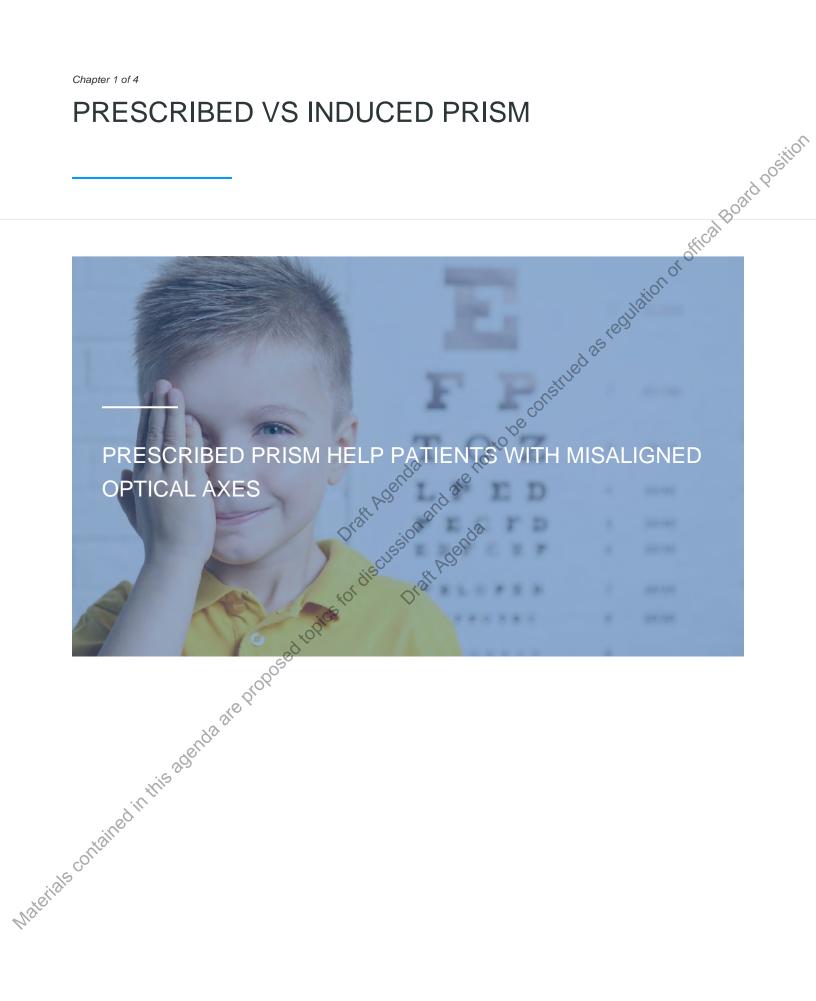
rules of balancing prescribed prism in an actual prescription

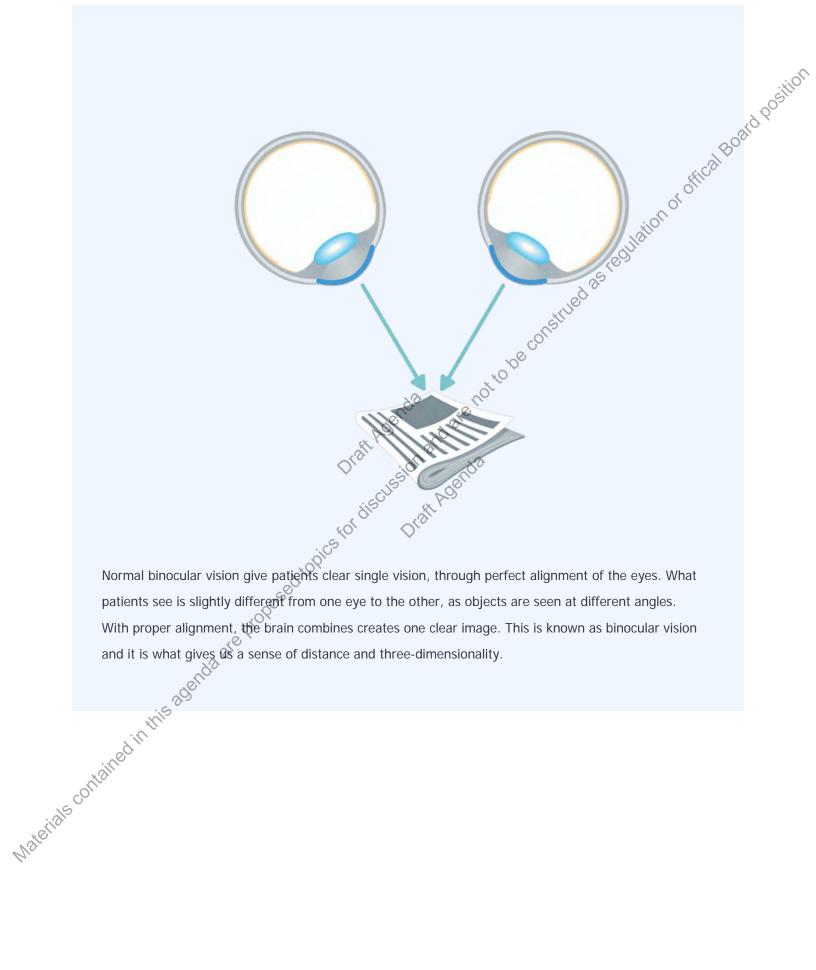
How to balance prescribed prism in an actual prescription

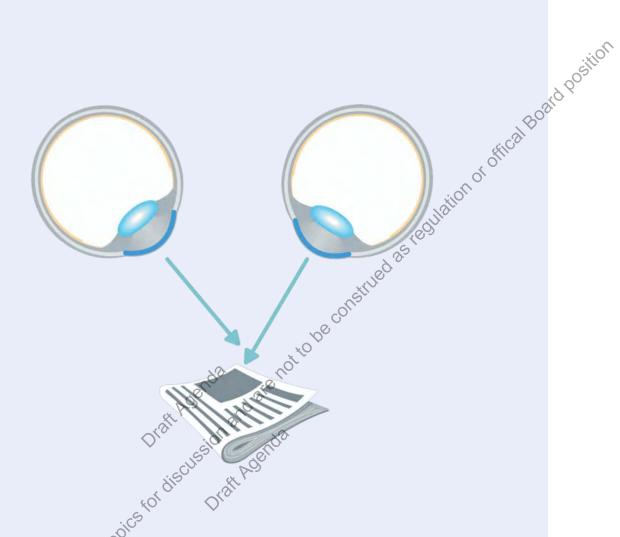
Multiplication of the prism in an actual prescription

Multiplication of the prism in an actual prescription

Multiplication of the prism in a compounding the prescription of the prescription of the prism in a compounding the prescription of the prescript







There are many cases though where the eyes are not in alignment with each other and the two eyes see not-so-slightly different images. The brain has trouble combining the two views, resulting in double vision.

Strabismus is the term to describe when one's eyes are misaligned. Strabismus is a failure of the two

Strabismus is the term to describe when one's eyes are misaligned. Strabismus is a failure of the two eyes to maintain proper alignment. The degree of misalignment can vary, ranging from small to large angle deviations. Strabismus can be constant or intermittent. The misalignment might always affect the same eye (unilateral strabismus), or the two eyes may take turns being misaligned (alternating strabismus).

The different types of strabismus are as followed:

- Exotropia: eyes are deviated outwards
- Esotropia: eyes are turning inwards
- Hypertropia: eyes are deviated upwards
- Hypotropia: eyes are deviated downwards

Lee construed as regulation or offical Board position Brath denda are proposed tropicator de la proposed tropicator del proposed tropicator de la prop

By prescribing prism, the doctor can deviate the light rays to the base so the image seen by the

Prisms are prescribed by the doctor in prismatic diopters. The doctor will also provide the base of the prescribed prism:

Some prisms are just up, down, in or out. Others are oblique, which requires that a horizontal and vertical base direction be specified. INDUCED PRISM IS USUALLY CAUSED BY A FABRICATION OR FITTING ERROR FABRICATION OR FITTING ERROR

When centers are ground too wide or too narrow, or fitted too high or low, a person with normally good alignment is forced to look through the unwanted prism that has been induced by the grinding or alignment error. Where no prism is required, its presence can cause blurred or double vision.

According to the ANSI Z80.1 standards, induced prism above 0.66 diopters horizontally or 0.33

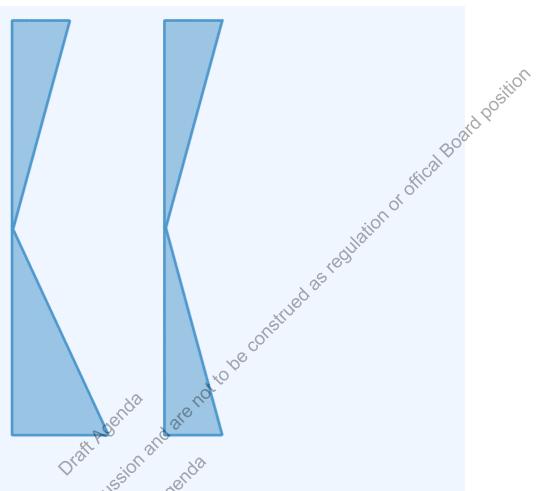
and the state of t

THE RULES FOR BALANCING PRISM

Often when doctors prescribe prism they write it as a total and leave it all in one eye

"mple: Oggeth 30 with 10A down

"like will work in theory, the real lenses will be out of balar
e split the prism is to create better cosmetics by b*
balancing weight.



The diagram to the left shows two example gross sections of minus lenses, depicted as a pair of prisms apex-to-apex. The "out of balance" lens (left) is thinner on the top than on the bottom of the cross-section. For this reason, we could say the prism is "out of balance" or "unbalanced".

What these rules do is allow you to break one large amount of prism into two smaller amounts of

amount of prism into two smaller When splitting prism you may split the amount as long as it adds up to the total, but you must always keep the direction the same in the prescribed eye. If the prescribed prism is up or down, the split should be distributed with up in one eye and down in the other (compounding effect). Whenever prescribed prism is split, you must keep the prescribed direction the same in the prescribed eye.

Original Rx	Same Rx with split prism
OD: -1.00 sph 10∆ down	OD:-1.00 sph 5∆ down
OS: -1.00 sph	OS: -1.00 sph 5∆ up

	0,00
	agulation
If the prescription power prescribed prism is the	er is already balanced from eye to eye, a 50/50 split of the appropriate choice. As an example:
Original Rx	Same Rx with split prism
OD: -1.00 sph 5∆ down	OD:2-1.00 sph 2.5∆ down
OS: -1.00 sph	Dro OS; 21.00 sph 2.5Δ up
	of Orall

If one lens has less power, and therefore less thickness and weight, you might consider putting the majority (60% to 70%) of the split prism in the weaker lens, which will make the lens thicker and thereby achieve better balance in thickness between the two lenses. die

	Originalex	Same Rx with split prism
X C	D:-6.00 sph 5∆ down	OD:-6.00 sph 1∆ down
,	OS: -1.00 sph	OS: -1.00 sph 4∆ up

When splitting up prism, you want to ensure that the prismatic effects of each eye are additive to reach the prescribed amount of prism (compounding effect). You can do this with the following compounding situations:

Base up + base down	Base in + base in	Base out + base out

	additive to reach the prescribed amount of prism (compounding effect). You can do this with the following compounding situations:	Silion
	with the following compounding situations: Base up + base down Base in + base in Base out + base out Sign of difficial Board of	03
	or office	
	In the case of prescribed prism in or out, the base direction should be the same in both eyes and in the same direction as the prescribed prism (compounding effect). The result will be split prism with balanced weight and thickness.	
	Original Rx Same Rx with split prism	
	OD: -1.00 sph 10∆ out OD:-1.00 sph 5∆ out	
	OS: -1.00 sph Splitting prism should be done with the doctor's permission. Always check with the	
	for disculpture Draft Ass	
	doctor before splitting prism.	
	ad in this agenda at	
Materialscort	kained in this agenda are propo	

KEY TAKEAWAYS

In the lesson on "Balancing prescribed prism", you learned that:

- Prism can be prescribed by the doctor to address misalignment of the patients vision.

 Trism can also be induced due to fabrication or find the patients vision.
- Prism can also be induced due to fabrication or fitting error.

 The desired effect of prescribed prism can be loaded all to preferably balanced between both. The desired effect of prescribed prism can be loaded all into one eye (i.e., in one lens) or
- preferably balanced between both eyes.

 The reason we split the prism (between lenses) is to create better cosmetics by balancing thickness and better wearing comfort by balancing weight.
- If the prescribed prism is up or down, the split should be distributed with up in one eye and down in the other.
 - In the case of prescribed prism in or out, the base direction should be the same in both eyes and in the same direction as the prescribed prism.

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Welcome to the lesson on focal length of a spectacle lens. At the end of this lesson, you will be able to:

- Define "focal length"
- Explain the concept of focal length and its relationship to dioptric power
- Explain the difference between a real and a virtual focal point
- · Determine dioptric power if given focal length
- Determine the focal length if given the dioptric power

DEFINING FOCAL LENGTH

KNOWLEDGE CHECK

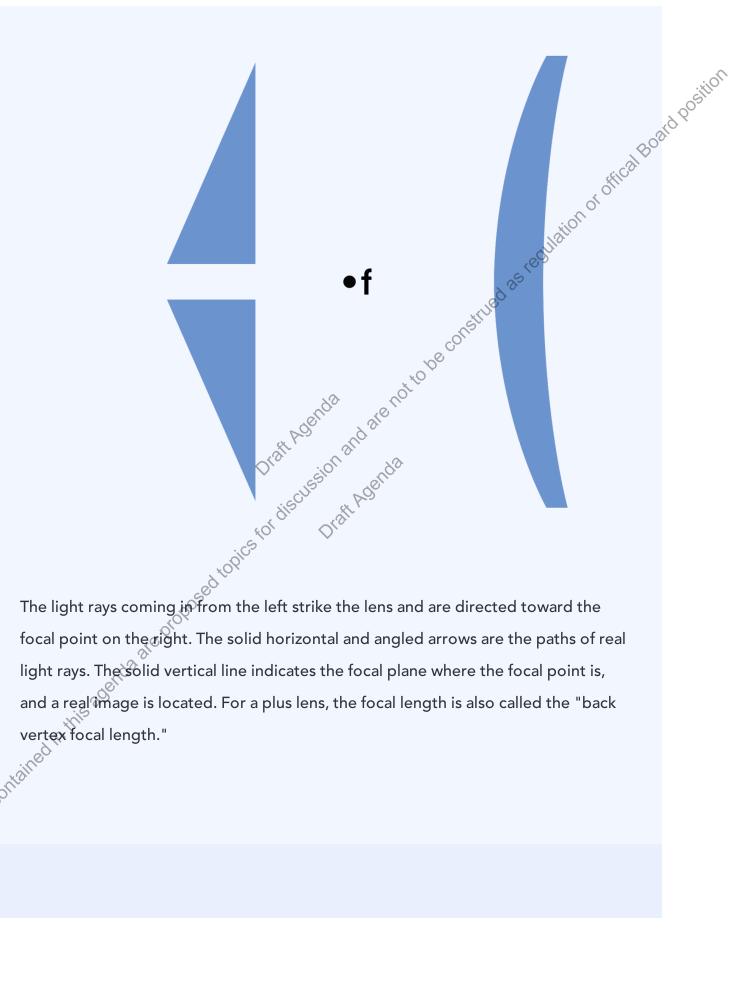
KEY TAKE FOCAL LENGTH AND DIOPTRIC POWER

DEFINING FOCAL LENGTH

Offical Board position THE FOCAL LENGTH OF A LENS IS THE DISTANCE FROM THE CENTRE OF THE LENS TO THE POINT AT WHICH THE IMAGE OF A DISTANT OBJECT IS IN FOCUS

A PLUS LENS WILL MAKE PARALLEL RAYS OF LIGHT CONVERGE TO A REAL IMAGE AT THE FOCAL POINT OF THE LENS

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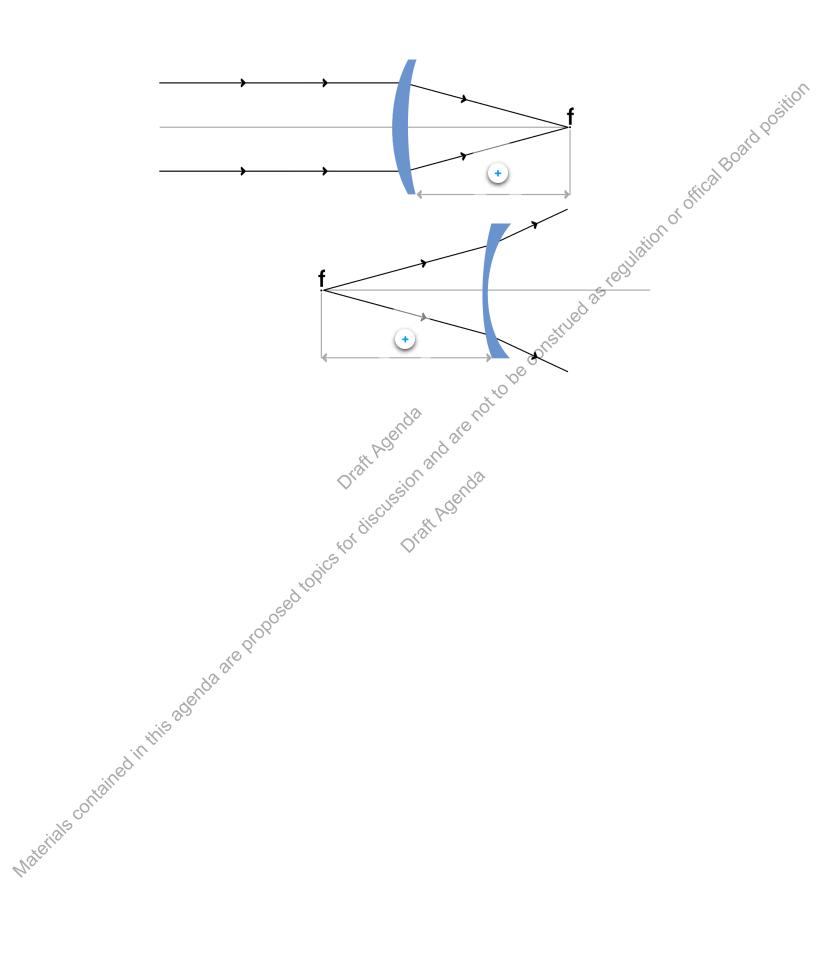
vertex focal length."

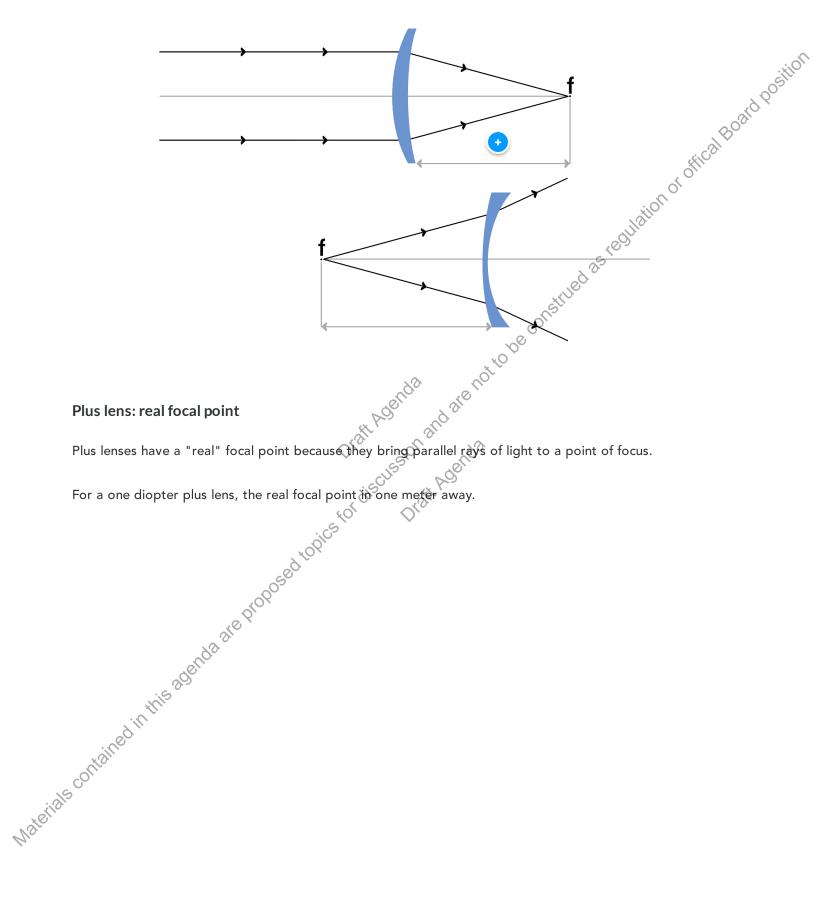
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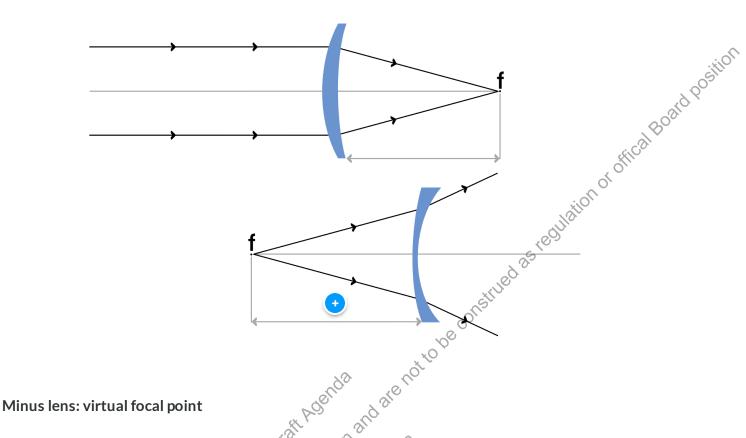
Treat the contract of the property of the prop rays backwards (dotted lines) until they meet at the focal point. The distance from

FOCAL LENGTH AND DIOPTRIC POWER

Led as regulation of official Board position ANDS, IT WAS THE FOCAL
LENGTH OF A ONE DIOPTER LENS
IS ONE METER







Minus lenses have a "virtual" focal point because in order to find the focal point you must virtually trace the real rays backwards to find them.

For a one diopter minus lens, the virtual focal point in one meter away.

THE LENS POWER IS EQUAL TO THE RECIPROCAL OF

Materials contained if given the lens power, you can determine the focal length by applying the following formula:

Similarly, you can determine the lens power from the focal length with the following formula:

for	mula:				
Lens power (in diopter) =	Lens power (in diopter) = 1 / Focal length (in meters) As the power of a lens increases, the focal length decreases. In a similar way, when				
	As the power of a lens increases, the focal length decreases. In a similar way, when the focal length of a lens increases, the power of a lens decreases.				
Overall lens power	Focal length				
0.25 diopter	2 meters 1 meter 0.5 meter				
0.50 diopter	2 meters				
1 diopter	1 meter				
2 diopters	0.5 meter				
	0.25 meter				
adenda al					
4 diopters CON CON	TINUE				
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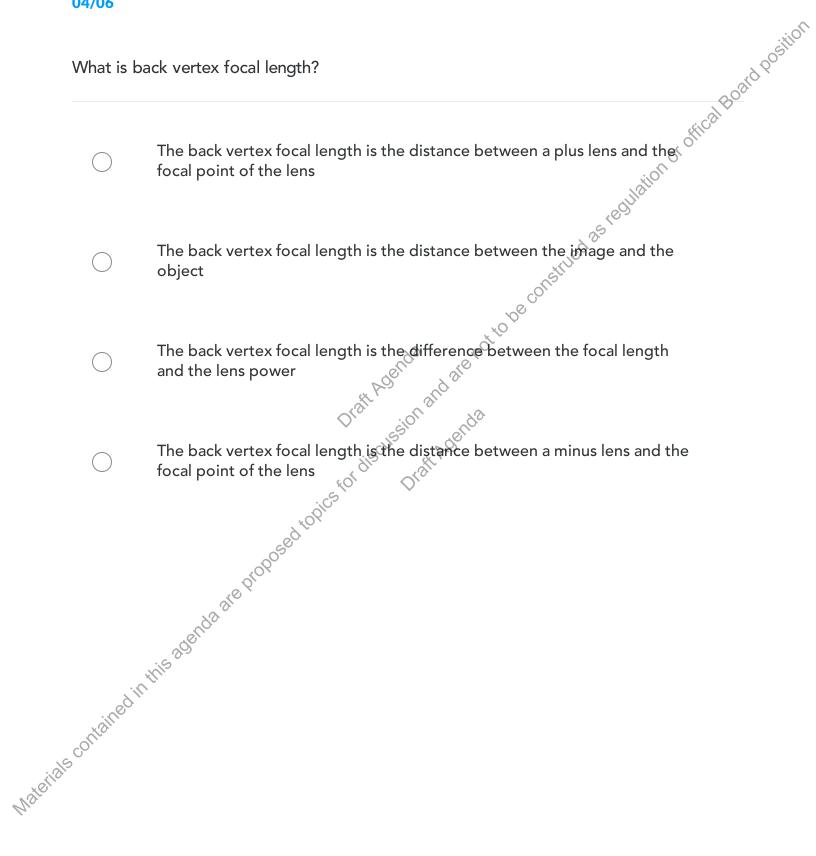
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The focal	ength of a lens is a	a measurement	of how strongly	it converges or	· diverges l
	True				ation or offic
	ength of a lens is a True False			nstrued as red	No.
		. 6	anda are not to	Se CO.	
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ontainedin	Hip				
lalso					

Focal length and power of the lens are:	

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What is back vertex focal length?



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What is	the focal	lenath	of a	20	dionter	lens?
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Test begins and the state of th

KEY TAKEAWAYS

Regulation or offical Board position IN THE LESSON ON FOCAL LENGTH OF A SPECTACLE LENS, **YOU LEARNED:**

- The focal length of a lens is a measurement of how strongly it converges (focuses) or diverges (diffuses) light
- A plus lens will make parallel rays of light converge to a real image at the focal point of the lens. The focal length is also called the back vertex focal length
- diverging rays backwards. The distance from the lens to the virtual focal
- Justance from the lens to the virtual focture of the front vertex focal length

 4 This of you are given the power of a lens, you can compute the focal length. Similarly, if you are given the focal length of a lens, you can compute the lens power

 The lens power in Similarly, if you are given the focal length of a lens, you can compute the
 - The lens power is equal to the reciprocal of the focal length measured in

Amission of Angular An



Welcome to the lesson on magnification and spectacle lenses. At the end of this lesson, you will be able to:

- Manage the variables of lens design to balance magnification between lenses

 WHAT IS MAGNIFICATION?

 WHAT IS MAGNIFICATION?

THE MAGNIFICATION FORMULA

ARIABITATION ARIAB MANAGING VARIABLES TO IMPACT MAGNIFICATION

WHAT IS MAGNIFICATION?

Offical Board position THE TERM "MAGNIFICATION" IS **USED TO DESCRIBE BOTH MAGNIFICATION AND MINIFICATION**

Spectacle lenses are prescribed to correct refractive errors within the eye and provide focused vision. However, one "side effect" of refractive lenses is the tendency of lenses to magnify or minify objects.

All spectacle lenses cause some degree of magnification. The visual system is usually not bothered by magnification, provided it is relatively equal between both lenses.

Materia

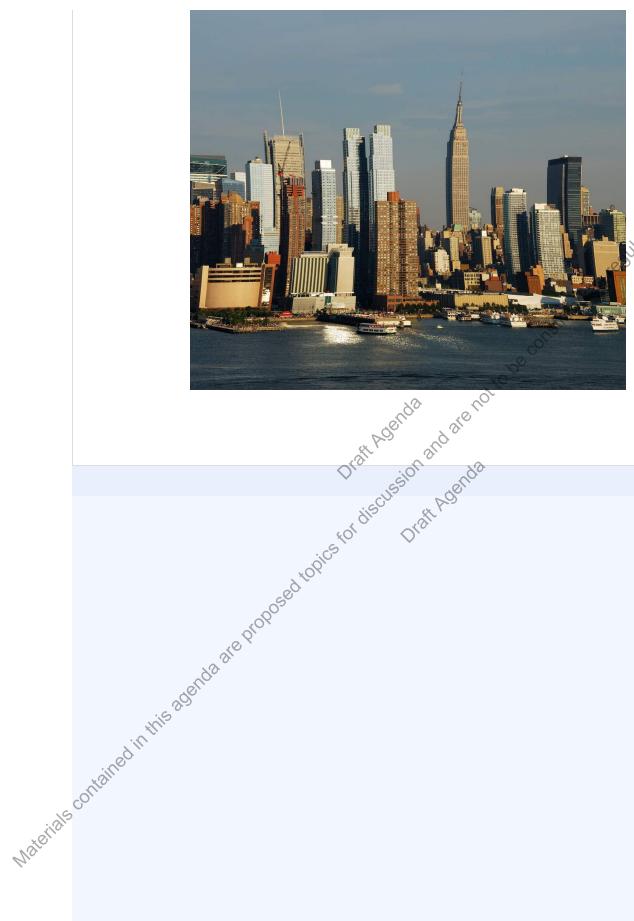
Magnification occurs when a spectacle lens enlarges the image of an object being viewed. Magnification is directly proportional to the amount of plus power in a lens (that is, the greater the plus power, the higher the level of magnification produced by the lens).



MAGNIFICATION

MINIFICATION

Materials contained in this agenda are propo Minification occurs when a spectacle lens reduces the image size of a viewed object. Minification is directly proportional to the amount of minus power in a lens (that is, the greater the minus power, the higher the level of minification produced by the lens).



Julation or official Board position



However, when lenses produce significantly different amounts of magnification, the brain is not able to maintain binocular vision (i.e. combine the images of both eyes

This condition is called aniseikonia, and can usually occur when the difference in magnification is greater than 4% (which occurs when the difference in between the right and left.)

That head the state of the stat

THE MAGNIFICATION FORMULA

Offical Board position THE FORMULA USED TO CALCULATE MAGNIFICATION IN A LENS IS MADE OF LENS SHAPE AND POWER INFORMATION

MAGNIFICATION = SHAPE FACTOR x POWER FACTOR

SHAPE FACTOR

POWER FACTOR

The shape factor contains information about the shape/appearance of the lens:

Materials contained!

- thickness (in meters)
- base curve
- index of refraction

The power factor contains information about the refractive power of the dens and its position in front of the eye.

POWER FACTOR = 1 / [1] - (vertex * power)]

Ordinary Density Densi

POWER FACTOR = 1 / [1 - (vertex x power)]

The formula used to calculate magnification in a lens is as follows:

MAGNIFICATION = 000 Political (1) 1 / [1 - (thickness/index) x base curve] x 1/[1 - (vertex x power)]

Although it is not important or practical to memorize the spectacle magnification magnification (which becomes apparent when considering the formula). formula, it is important to understand how each element of lens design affects

Design variable	Impact	Impact

Design variable	Impact	Impact
Thickness	Increased thickness = Stronger magnification	Increases shape factor
Index	Higher index = Lower magnification	Decreases shape factor
Base curve	Increased base curve = Stronger magnification	Increases shape factor
Vertex	Increased vertex distance = Stronger magnification	o [©] Increases power factor
Lens power	Increased plus power = Stronger magnification	Increases power factor

CONTACT LENSES ARE WORN WITH NO VERTEX ONTACT LA DISTANCE are DISTANCE are Materials contained in this agenda,

- Most patients are refracted at a 10 to 14 mm distance. Taking into account these different distances, all contact lens prescription over + or -4.00 diopters need to be compensated for vertex distance.
- When switching from contact lenses to spectacle lenses, patients will experience changes in magnification. Myopes may experience

The state of the s minification when wearing spectacle lenses, in comparison to contacts. On the contrary, hyperopes may experience magnification with lenses at

MANAGING VARIABLES TO IMPACT **MAGNIFICATION**



BASE EXAMPLE: HIGH PLUS LENS WITH STANDARD

BASE EXAMPLE: HIGH PLUS LENS WITH STANDARD VARIABLES			
Materials	, CO,	Design variable	Value
No		Thickness	5mm (0.005m)

Design variable	Value
Index	1.50
Base curv e	8.00
Vertex	13mm (+3mm) = 16mm +6.00 sphere
Lens power	+6.00 sphere

	2800
In this case, the magnification formula is: magnification = $1 / [1 - (0.005/1.50) \times (8.00)]$	0)] × 1 / [1 - (Q;016 × 6.00)]
SHAPE FACTOR	on and on 1.027
POWER FACTOR (1)SCUESS	1.106
SHAPE FACTOR × POWER FACTOR	1.136
MAGNIFICATION	13.6%

CONTROL OF THE BASE CURVE LEADS TO LOWER MAGNIFICATION

Design variable	Value
Thickness	5mm (0.005m)
Index	1.50
Base curve	6.00 (change from 8.00 in example #1)
Vertex	13mm (+3mm) = 16mm
Lens power	+6.00 sphere

In this case, the magnification formula is magnification = $1/[1 - (0.005/1.50) \times (6.00)] \times 1/[1.0(0.016 \times 6.00)]$

	SHAPE FACTOR	1.020
	POWER FACTOR	1.106
	SHAPE FACTOR × POWER FACTOR	1.128
	MAGNIFICATION	12.8%
Materials	In this example a change from 8.00 to 6.00 magnification from 13.6% to 12.8%.	in base curve leads to a decrease of

DECREASING THE CENTER THICKNESS LEADS TO FURTHER DECREASE

Design variable	Value
Thickness	3mm (change from 5mm in example #1)
Index	1.50d 25 \
Base curve	6.00 (change from 8.00 in example #1)
Vertex	13mm (+3mm) = 16mm
Vertex Vertex Lens power	+6.00 sphere

In this case, the magnification formula is:

magnification = $1/[1-(0.003/1.50) \times (6.00)] \times 1/[1-(0.016 \times 6.00)]$

	SHAPE FACTOR	1.012
	POWER FACTOR	1.106
riat	SHAPE FACTOR x POWER FACTOR	1.119
	MAGNIFICATION	11.9 %

Materia

as regulation or official Board position In this example a change from 5mm to 3mm center thickness leads to a further decrease of magnification to 11.9% (originally 13.6% in example #1).

DECREASING THE VERTEX DISTANCE LOWER MAGNIFICATION FURTHER

Design variable	Value
Thickness	3mm (0.003mm) 1.50
Index	1.50
Base curve Vertex	6,00 (change from 8.00 in example #1)
Vertex A tolio	10mm (+3mm) = 13mm
Lens power	+6.00 sphere

	Lens power	+6.00 sphere
	FIL.	
	magnification = 1 / [1 - (0.003/1.50) x (6.00)] x 1 / [1 - (0.013 x 6.00)]
CO.	SHAPE FACTOR	1.012
	POWER FACTOR	1.085
		In this case, the magnification formula is: magnification = 1 / [1 - (0.003/1.50) x (6.00 SHAPE FACTOR

SHAF	PE FACTOR x POWER FA	ACTOR		1.098		
	MAGNIFICATION			9.8%		osition
	mple a change of vertex dist	ance from 13i	mm to 10mm leads 1	a tarther decrease or of	ical Bos	ard Position
	ASING THE REFRA	ACTIVE I	INDEX DECR	PEASES Value		

	· (Q)
Design variable	Value
Thickness Index	3mm (0.003mm)
Index	1.67 hi-index
Base curve Vertex Lens power	6.00 (change from 8.00 in example #1)
vertex	13mm (+3mm) = 16mm
Lens power	+6.00 sphere

In this case, the magnification formula is:

magnification = $1 / [1 - (0.003/1.67) \times (6.00)] \times 1 / [1 - (0.013 \times 6.00)]$

MAGNIFICATION	9.7%	
SHAPE FACTOR x POWER FACTOR	1.097	2
POWER FACTOR	1.085	
SHAPE FACTOR	1.011	

In this example a change of refractive index (from 1.50 to 1.67) leads to a further decrease of magnification to 9.7%.

The only variable we have left alone is the refractive power of the lens (since we

The only variable we have left alone is the refractive power of the lens (since we cannot change the Rx). Magnification has been reduced from 13.6% to 9.4%, which is quite significant. Remember, the goal is not to eliminate magnification, but rather to get the magnification levels of the lens to within 4% of each other.

CONTINUE

Materials contained in this agend?

Test begins and the professed of the first search of the first sea

.er than:

1.50 diopter

2.50 diopters

4.00 diopters

5.00 diopters

4.00 diopters

4.00 diopters

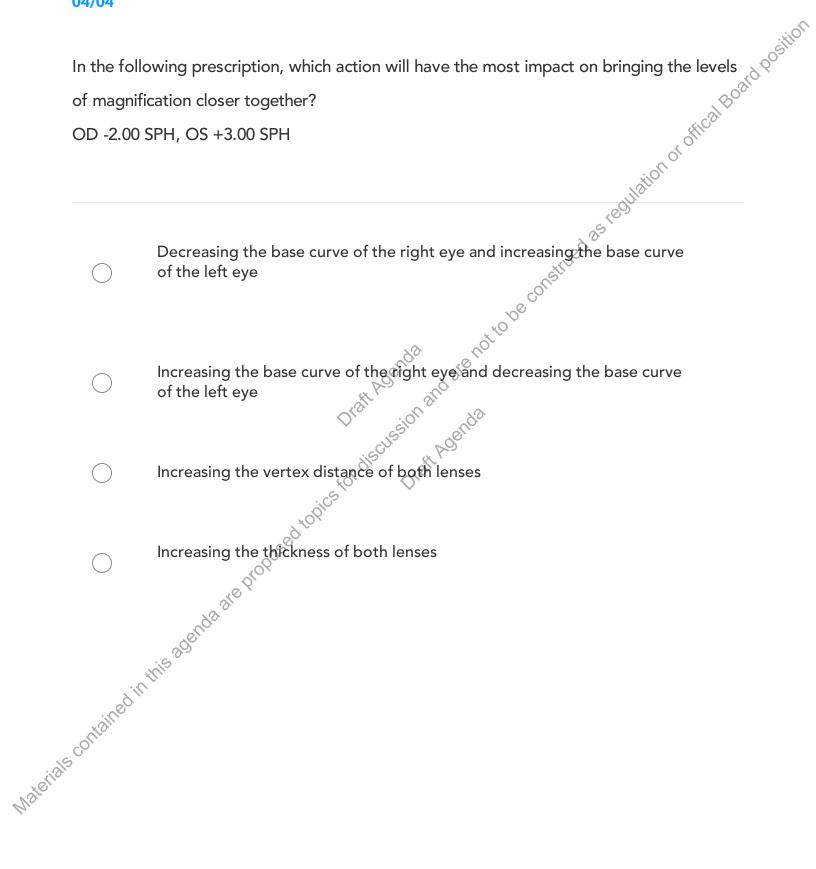
4.00 diopters

02/04	.00
What actions will reduce the difference in magnification between the lenses of this	
What actions will reduce the difference in magnification between the lenses of this prescription: OD +1.00 SPH, OS +6.00 SPH, OU +2.50 ADD. Select all applicable answers:	
Decrease magnification of the left lens by selecting a lower base curve	
The cost magnification of the right lens by mercasing that content ameniness	
Increase magnification of the left lens by increasing the center thickness	
Increase magnification of the left lens by increasing the center thickness Increase magnification of the right lens by selecting a higher base curve Increase magnification of the right lens by selecting a higher base curve Increase magnification of the right lens by selecting a higher base curve	

on or official Board position What are the most recommendable actions you can take to reduce the difference in magnification between the lenses of this prescription: OD -0.50 SPH, OS $\,$ -8.00 SPH. Selection all applicable answers.

	Select a flatter base curve to increase minification of the right eye
	Select a steeper base curve to decrease minification in the left eye
	Increase index of refraction in the left lens to decrease minification
	Increase index of refraction in the left lens to decrease minification
	Increase index of refraction in the left lens to decrease minification Increase thickness of the right eye
dill	

Materials contains



KEY TAKEAWAYS

Fedulation of Offical Board Position IN THE LESSON ON "MAGNIFICATION AND SPECTACLE LENSES" YOU HAVE LEARNED:

- The elements of lens design which influence magnification are: base curve, thickness, vertex, and index of refraction
- There are several methods for adjusting these three elements in order to create binocular harmony
- The magnification formula can be used to determine the total amount of magnification difference between the eyes
- The magnification formula can be used as a predictor of how design changes will solve the problem of magnification imbalance

You have completed the lesson!

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The series of the state of the

Vertex effect

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VERTOK OVERVIEW
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VERTEX OVERVIEW

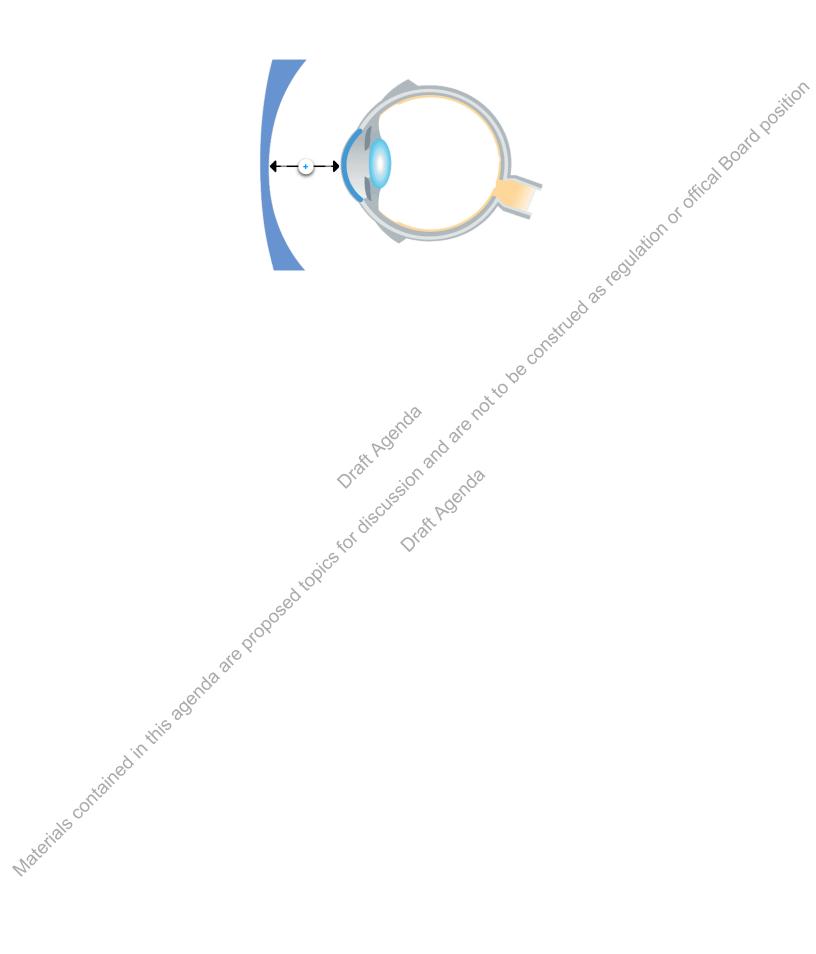


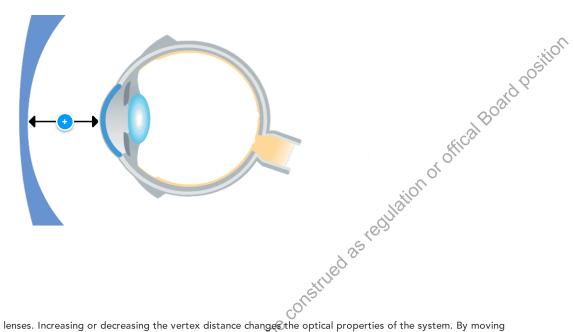
Whenever any lens is moved farther or closer in the fit than where it was examined, the perceived power of the lens changes. In lenses with powers less than 6.50 diopters, this change is usually not significant, but in lenses above 6.50 diopters, wearers will usually notice a difference.

Vertex compensation enables the optician who notes differences between the examined and fitting vertices to adjust the lens power in the worn lenses to match the value of the examined power.

THE VERTEX DISTANCE IS THE DISTANCE BETWEEN THE BACK SURFACE OF A CORRECTIVE LENS AND THE FRONT OF THE CORNEA

All lenses have two dioptric power values. One is the actual power which may be measured in a lensometer, and the other is the effective power which only the wearer perceives. The same lens may be perceived in different ways by the same wearer depending on variations in vertex (fitting distance).





Vertex distance

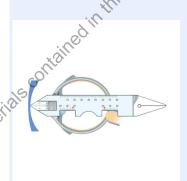
Vertex affects the perceived power of all lenses. Increasing or decreasing the vertex distance changes the optical properties of the system. By moving the focal point forward or backward, the optician can effectively change the power of the lens relative to the eye.

The effect is most notable in lenses of greater dioptric power. As lens power increases, so too will the effect of vertex on power.

WHEN IS VERTEX COMPENSATION NECESSARY?

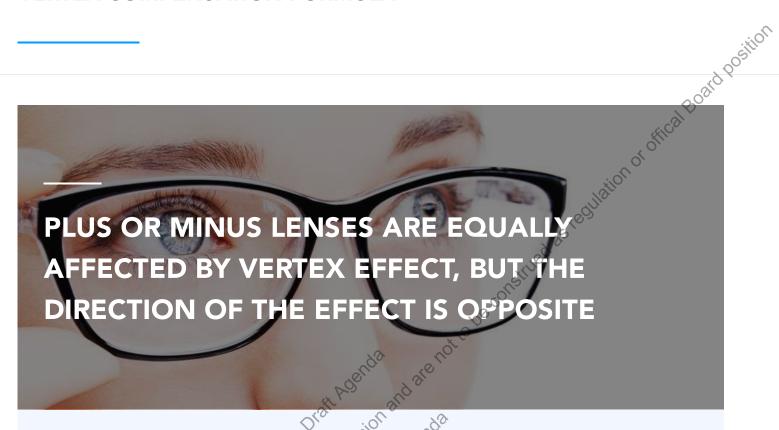
A prescription conveys the dioptric power necessary to correct a given condition of the eye. In order to achieve the exact result with a pair of spectacles, the dioptric power and the fitting vertex should equal the prescribed power and the examined vertex. Otherwise compensations should be made.

THERE ARE MANY WAYS TO TAKE A VERTEX MEASUREMENTS. ELECTRONIC DEVICES ARE THE MOST ACCURATE





VERTEX COMPENSATION FORMULA



Whenever any lens is moved farther or closer in the fit than where it was examined, the perceived power of the lens changes. In lenses with powers less than 6.50 diopters, this change is usually not significant, but in lenses above 6.50 diopters, wearers will usually notice a difference.

Lens type	Fitting situation	Perceived effect	Compensation needed
Plus lens	Increased vertex	Strengthening effect	Weaker lens power
Plus lens	Decreased vertex	Weakening effect	Stronger lens power
Minus lens	Increased vertex	Weakening effect	Stronger lens power
Minus lens	Decreased vertex	Strengthening effect	Weaker lens power

TWO-STEP APPROACH TO CALCULATE THE **NECESSARY COMPENSATION IN POWER:**

You must first calculate the amount of compensation necessary per millimeter of displacement:

Amount of compensation necessary per millimeter of displacement

 $= (Lens power)^2 / 1000$

O or offical Board position of offical Board position You should then multiply that number by the exact number of millimeters of displacement between the examination vertex and the fitting vertex:

Amount of compensation necessary per millimeter of

X Millimeters of displacement

Compensation in power needed at fitting vertex

example #1: COMPENSATING A SPHERICAL LENS

The prescription give by the doctor reads a pair of + 10.00 SPH, with an examined vertex of 15.0 mm. Upon fitting the individual with lenses, we determine that the new lenses will have a fitting vertex of 12.0 mm (average vertex distance for adults are between 12 to 14mm). Remember that when moving a plus lens closer, we must compensate and fit with a stronger plus lens.

Amount of compensation necessary per millimeter of displacement

 $= (10.00)^2$ diopters / 1000

= 100/1000 = 0.10

In this example, there is a 5.0 mm displacement.

0.10 diopters

X 3.0mm of displacement

= 0.30 diopters of compensation

CONSIDER A LENS WITH POWER EQUAL TO +10.00 DIOPTERS, WHICH NEEDS TO BE DISPLACED BY 5.5 MILLIMETERS

FITTED FARTHER AWAY FITTED CLOSER

First formula: (10.00)* divided by 1,000 = 100 divided by 1,000 = 0.10 diopters / mm Second formula: 0.10 diopters per millimeter of displacement x 5.5 millimeters = 0.55 diopters Since it is a plus lens fitted closer, there is a weakening effect. We must strengthen thelens power of the compensate. Therefore, add 0.53 diopters to the original lens power of + 10.00 diopters = +10.55 diopters. CONSIDER A LENS WITH POWER EQUAL TO -10.00 DIOPTERS, WHICH NEEDS TO BE DISPLACED BY 5.5 MILLIMETERS FITTED FARTHER AWAY FITTED CLOSER FITTED FARTHER AWAY FITTED CLOSER FITTED CLOSER FITTED FARTHER AWAY FITTED CLOSER FITTED FARTHER AWAY FITTED CLOSER FITTED FARTHER AWAY FITTED CLOSER FIT

Materials contained in this add

FITTED FARTHER AWAY

FITTED CLOSER

First formula: $(10.00)^2$ divided by 1,000 = 100 divided by 1,000 = 0.10 diopters / mm Second formula: 0.10 diopters per millimeter of displacement x 5.5 millimeters = 0.55 diopters

Since it is a minus lens fitted farther away, there is a strengthening effect. We must weaken the lens power to compensate. Therefore, add 0.55 diopters to the original lens power of - 10.00 diopters = - 9.45 diopters.

A new Rx reads -10.00 -4.00 x 090 in both eyes, with an examined vertex of 15.0 mm and a fitting vertex of 12.0 mm.

The compensation procedure is a second of the compensation procedure is a second of the compensation procedure.

The compensation procedure is the same, but now we must use the formula twice, once for each meridian. We should view cylinders as two separate lenses view cylinders as two separate lenses.

SPHERE COMPENSATION

Amount of compensation necessary per millimeter of displacement

 $= (-10,00)^2$ diopters / 1000

= 100/1000 = 0.10

0.10 diopters of change per mm of displacement x 3.0 mm of displacement = 0.30 diopters of compensation. Since this is a minus power, moving the lens closer will have a strengthening effect. Therefore, we must weaken the lens to compensate. The resulting compensated sphere power is 9.70 diopters.

CYLINDER COMPENSATION

In the 180 meridian, we have -14.0 diopters of power:

Amount of compensation necessary per millimeter of displacement

 $= (-14.00)^2$ diopters / 1000

= 196/1000 = 0.196

0.196 diopters of change per mm of displacement X 3.0 mm of displacement = 0.588 diopters. Round this answer to the nearest quarter diopter, which is 0.50 diopter.

Because the situation is a minus lens fitted closer, there is a strengthening effect. We must weaken the cylinder lens power by 0.50 diopter from -14.00 to -13.50 diopters in the 180 meridian. The resulting value will be the new cylinder

- Power in cylinder meridian = -13.50 diopters
- Sphere power = -9.50 diopters

Test begins and the second of the second of

KNOWLEDGE CHECK

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All lenses	s have two dioptric power values. They are:	
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A minus	ens with a increased vertex fitting will	give:		
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IN THE LESSON ON "BALANCING PRESCRIBED PRISM" YOU LEARNED:

- The vertex distance is the distance between the back surface of a corrective lens and the front of the cornea
- All lenses have two dioptric power values. One is the actual power which may be measured in a lensometer, and the other is the effective power which only the wearer perceives
- Vertex compensation enables the optician who notes differences between the examined and fitting vertices to adjust the lens power in the worn lenses to match the value of the examined power
- Whenever any lens is moved farther or closer in the fit than where it was examined, the perceived power of the lens changes. In lenses with powers less than 6.50 diopters, this change is usually not significant, but in lenses above 6.50 diopters, wearers will usually notice a difference
- 5 To calculate the necessary compensation in power, you must:
 - first calculate the amount of compensation necessary per millimeter of displacement. It is equal to (Lens power)²/1000
 - then multiply that number by the exact number of millimeters of displacement between the examination vertex and the fitting vertex

You have completed the lesson!

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FOCAL LENGTH OF A SPECTACLE LENS 02 What is the focal length of a 10 diopter lens?

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FOCAL LENGTH OF A SPECTACLE LENS 03

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FOCAL LENGTH OF A SPECTACLE LENS 04 Vertex distance is:

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05	FOCAL LENC What is the fo	GTH OF A SPECTACLE LENS ormula for focal length?	
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in this as	· · · · · · · · · · · · · · · · · · ·	Focal length = 1/lens power	
ontained in		Focal length = 1/difference between the minus lens and the focal point	
Materials contained in this as		Focal length = 1/difference between the plus lens and the focal point	
N.			

66 FOCAL LENGTH OF A SPECTACLE LENS Minus lenses have a _____ focal point.

Select the best answer and then click "Submit"

	4	HI
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07 FOCAL LENGTH OF A SPECTACLE LENS

A minus lens could be described as ______.

Select the best o	answer and then click "Submit"	~ ^Q
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Materials contained in this adenda are proposed topics

VERTEX COMPENSATIONAll lenses have two dioptric powers. They are:

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09 VERTEX COMPENSATION

10

The examined and fitting vertex will be the same when optometrists use this instrument to obtain the patient's Rx:

t the best o	answer and then click "Submit"	(10)
orrect	Choice Text	Multiple Choice ∨
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VERTE The ins	compensation ens with an increased vertex fitting will result in est answer and then click "Submit" Choice Text weakening effect strengthening effect strabismus effect X COMPENSATION trument used to measure vertex is known as: the best answer and then click "Submit" the choice Text Lensometer Lensometer	
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17		FION AND SPECTACLE LENSES o control imbalances using since both lenses are mounte	d in the
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٠,٠	adelloga	Predict the change in magnification percentage before ordering the lenses	
ed in this		Predict the change in magnification percentage after ordering the lenses	
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19	MAGNIFICATION AND SPECTACLE LENSES Which of the following is a factor when determining magnification?		
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	Correc	Flatten towards the center of the lens	-
	ale prof	Create the effect of a steeper base curve and a thinner profile	
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inedinith		Increases magnification	
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From: kaviles@abo-ncle.org To: **Shoven Paige** Subject: ABO Course Approval

Wednesday, March 6, 2024 2:21:07 PM Date:

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY NATIONAL CONTACT LENS EXAMINERS

217 N. Upper Street, Suite 201

Lexington, KY 40507

703-719-5800 • 800-296-1379

Web Address: www.abo-ncle.org

Dear Walter,

This letter will confirm that the American Board of Opticianry Education Committee approved the following online course:

Course: Lens Standards and Formulas
Hours: 1
Designation: Ophthalmic Level II

Course Number: STWEOA127-2

Expires: March 6,202

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

Karla Y. Aviles

Education Coordinator

This email was sent to PShoven@us.luxottica.com. You are receiving this email because you submitted a course for approval.

to be construed as regulation or officed Board position

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To Whom It May Concern,

Jer of Jest the state of the st

CEC: LENS STANDARDS AND FORMULAS

LENS STANDARDS AND FORMULAS covers the following areas:

- 1. **ANSI Standards**: Describes ANSI standards and how these standards are applied to eyewear, both for lenses and frames. It reviews important considerations for reviewing these standards when making a recommendation to the patient. When working with patients, it is critical that you adhere to the standards set by the American National Standards Institute (ANSI) to ensure patient safety and comfort, as well as reduce your practice liability.
- 2. Toric Transposition: Defines the concept of Toric Transposition and how to use a lens clock to get the basic power readings of each lens surface.
- 3. Sagittal Formula: Defines Sagittal value and how to consider different elements of Sagittal value when dispensing lenses to a patient. This course will also describe how to compute the finished thickness of a patient's lenses.

Course outline/timing: Total 50 minutes

- ANSI Standards (20 minutes)
- 1) 2) Course Objectives
 - a) Explain relevant ANSI industry standards
 - b) Explain why ANSI standards are important
 - c) Recommend safety eyewear with confidence
 - d) Explain the impact resistance testing process and its importance
 - e) Describe how ANSI standards apply when dispensing eyewear to patients
- 3) What are Standards and Why Do We Need Them?
 - a) Light Bulb illustration
 - b) Clothing illustration
 - c) Spark Plugs for Engines illustration
 - d) Trains illustration
- The American National Standards Institute

 a) What are ANSI Standards 4)
 - a) What are ANSI Standards?
 - b) ANSI Standards ensure:
 - i) The characteristics and performance of products are consistent
 - ii) Products are tested the same way
 - c) Who Develops ANSI Standards?
- ANSI Standards For Safety Eyewear 5)
 - a) Basic Impact Lens Standards
 - i) Have a minimum center thickness of 3.0mm
 - ii) Be stamped with the manufacturer's trademark
 - b) High impact Standards for Safety Eyewear
 - i) Minimum thickness of 2.0mm
 - ii) Capable of resisting impact from a 0.25" steel ball traveling at 150 feet per second
 - Marked with manufacturer's trademark and a '+' after the trademark
 - iv) Made from polycarbonate material, the safest choice
- Materials contained in this ac c) Safety frames:
 - i) Must be exposed to high-velocity and high-mass impact resistance tests while retaining the lenses
 - Must be marked with Z87-2, indicating they can be used for basic or highimpact
 - d) Side Shields:
 - i) Lateral protection will be 10mm behind the corneal vertex
 - e) Injuries In the Workplace
 - i) Every day an estimated 1000 eye injuries occur in America workplaces
 - ii) The annual financial cost of these injuries is more than \$300 million in lost

production time, medical expenses, and workers compensation.

- iii) Eye injuries happen because of:
 - (1) Striking or scraping: the majority of eye injuries result from small particles or objects striking or scraping the eye, such as: dust, cement chips, metal slivers, and wood chips. These materials are often ejected by tools, windblown, or fall from above a worker. Large objects may also strike the eye or face, or a worker may run into an object causing bluntforce trauma to the eyeball or eye socket
 - (2) Penetration: objects like nails, staples, or slivers of wood or metal can go through the eyeball and result in a permanent loss of vision
 - (3) Chemical and thermal burns: industrial chemicals or cleaning products are common causes of chemical burns to one or both eyes. Thermal burns to the eye also occur, often among welders. These burns routinely damage workers' eyes and surrounding tissue
- 6) Liability and The Ten Principles
 - a) The Ten Principles:
 - i) Insure that the lab supplying the eyewear you are dispensing, is properly ensured
 - ii) Insure that the lab supplying the eyewear you are dispensing, is properly ensured
 - iii) Inspect all eyewear to ensure they are properly marked. If it is not, reject the job and return it to the fabricating lab
 - iv) Never substitute safety frame parts
 - v) Never solder or otherwise "alter" a safety frame. Replace any broken or missing parts with original factory parts
 - vi) Never re-edge a safety lens. If you re-edge, you are responsible for monogramming the lens, thereby identifying yourself as the optical responsible for the performance of the eyewear
 - vii) Know the policy of the company you serve. Make exceptions only if written and signed by the person in charge of the program
 - viii) Make sure side-shields on all prescription safety eyewear are the exact model designed to fit the frame. Do not supply side shields that are not tested on a specific frame style
 - ix) Watch for loose lenses of any kind. If the frame is stretched or the lenses are too small, they should be replaced. Also, be on the lookout for scratched or pitted glass lenses. They will fail with minimal impact and represent a danger to the wearer. Contact the person responsible for the patient's safety and explain the hazard you have identified
 - x) Institute a "Duty to Warn Policy" in your optical for all patients
- 7) Key Takeaways
 - a) In your day-to-day activities, you will meet patients with different needs. You will need to determine if the patient's need is for the workplace, general-purpose, or sports eyewear
 - b) You need to adhere to specific ANSI standards to ensure patient safety and comfort
 - c) Safety requirements set by ANSI need to be followed to ensure patient safety and avoid
- dy Following the ten principles of safety eyewear will help you reduce liability

- 8) **TORIC TRANSPOSITION** (15 minutes)
- 9) Course Objectives
 - a) Define Toric Transposition
 - b) Explain the procedure of Toric Transposition
 - c) Use a lens clock to get basic power readings from each lens surface
- ens plation of official Board position d) Combine front and back readings to get the total lens power of a lens
 - e) Use a lens clock to get a quick add reading on traditional segments
- 10) What Is the Purpose of Toric Transposition?
 - a) Toric Transposition definition
 - b) Spectacle lens powers are achieved by combining various surface curvatures.
 - i) The lens clock is an instrument that reads surface curves.
 - ii) Front curves are generally convex and as such referred to as plus powers.
 - iii) Back curves are generally concave and as such referred to as minus powers.
 - iv) In order to derive lens power, you must read the power of the front curve and add it to the power of the back curve. The resulting value is the lens power.
 - v) Example
- 11) Lens Clock / The Tool
 - a) What is a Lens Clock?
 - i) Definition and what it is used for ?
 - ii) If the curve being measured is on the front surface of the lens, the black numbers
 - iii) If the curve being measured is on the back surface of the lens, the red numbers will apply
 - iv) A lens clock is precisely calibrated if it reads zero when pressed against a perfectly flat hard surface.
 b) Using the Lens Clock Step by Step
- Lens Clock and Proper Procedures 12)
 - a) Proper Lens Clock Procedure FrontSide
 - b) Proper Lens Clock Procedure Minus Side/Spheres
 - c) Proper Len Clock Procedure for Cylinder Surfaces
 - d) Proper Lens Clock Procedure for Minus Side/Cylinders
 - e) Toric Transposition and Axis
 - Toric Transposition/Bonus/Reading Add Power
- Key Takeaways 13)
 - a) What is Toric Transposition
 - b) Proper procedure for executing Toric Transposition
 - How to use a lens clock to get readings from both front and back surface
 - d) How to resolve readings from both sides to get total lens power
 - e) How to read an add power with a lens clock

- 14) **SAGITTAL FORMULA** (15 minutes)
- **15**) Course Objectives
 - a) Define Sagittal Value
 - b) Explain the procedure of Toric Transposition
 - c) List the elements of thin lens design
 - d) Arrange the variables into the framework of the formula
- Julation of Official Board position e) Use the formula to compute the finished thickness of any given lens
- 16) Sagittal Formula
 - a) Sagittal Formula definition
 - i) Sagittal Formula example
- 17) Elements of Lens Thickness
 - a) Variables Which Affect Lens Thickness
 - i) Frame Size
 - ii) Lens Shape
 - iii) Decentration
 - iv) Index of Refraction
 - v) Specified Center on Minus Lenses or the Edge on Plus Lenses
 - b) Frame Size
 - i) Frame size is the most significant element of thin lens design.
 - c) Lens Shape
 - i) Second to frame size, shape is a significant factor in reducing lens thickness.
 - (1) Effective Diameter
 - d) Decentration
 - i) Decentration is the third most significant factor in arriving at the finished thickness of a lens.
 - e) Computing Decentration
 - i) Step 1: A Box + DBL = FramePd
 - ii) Step 2: Frame Pd Patient Pd = Total Decentration
 - iii) Step 3: Frame Pd/2 = Monuclular Frame Pd
 - iv) Step 4: Subtract patients monocular Pd (left/right) from above
 - v) Example
 - f) Index of Refraction
 - i) Définition
 - ii) Example
 - g) Specified Center on Minus Lenses or Edge on Plus Lenses
 - h) Talk About Lenses Before Picking Out a Frame
- 18) Assembling the Formula
 - a) Finished Lens Thickness Computation
 - i) Step 1: Compute the decentration, double it, and add that value to the effective diameter of that shape.
 - Step 2: Using the following formula, compute the Sagittal value or thickness value. Radius Squared x Dioptric Power/2000 x (N-1) = Sag (Thickness) in mm (a) Radius = 1/2 of the number computed in Step 1 (v)
 - (b)Dioptic Power = Strongest Meridian of the lens. (Working with this number will always give the maximum thickness. Depending upon location of power, the reallens may be slightly (c) thinner.)

2000 = constant

- (d) N = Index of Refraction of material being used
- iii) Step 3: The answer in step 2 tells us the thickness of the lens with a zero edge (minus lens) or zero center (plus lens). We need to add 1.5 mm to calculate the real world lens thickness. This answer is the approximate finished thickness of the job. If the lens is plus, the answer refers to center thickness. If the lens is minus, the answer refers to edge thickness.
- iv) Example #1
- v) Example #2
- 19) Key Takeaways

- a) How Sagittal Value relates to lens thickness
- b) The many different elements of thin lens design
- c) How each element can be controlled to create the thinnest lens
- d) To arrange the variables into the framework of the formula
- e) How to use the formula to compute the finished thickness of any given lens

Learning Objectives:

- Offical Board Position 1. Explain the importance of adhering to ANSI standards when dispensing eyewear to patients, including the impact resistance testing process and the characteristics and performance requirements for safety eyewear.
- 2. Define and describe the concept of Toric Transposition, including how to use a lens clock to obtain basic power readings from each lens surface and how to combine front and back readings to determine the total lens power.
 - 3. Define Sagittal Value and list the elements that affect lens thickness, including frame size, lens shape, decentration, index of refraction, and specified center or edge on lenses. Explain how to use the Sagittal

including fram ses. Explain how ses. Explain how ses. Explain how ses. Explain how the constitution of the

Topic		Sagitt	agittal Formula								
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Screen Content Title	opic Sagittal Formula									
Title Question 2 Prompt Select the best answer then click Submit. Text What is the sagittal depth of a surface with the Material = Polycarbonate (Index 1.586 Curvature = 5.00D Lens Diameter = 60mm Learner options Place an X in the box to the left of the	e with Single Correct Answer									
Prompt Select the best answer then click Submit. Text What is the sagittal depth of a surface with the Material = Polycarbonate (Index 1.586 Curvature = 5.00D Lens Diameter = 60mm Learner options Place an X in the box to the left of the	Screen Content									
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Material = Polycarbonate (Index 1.586) Curvature = 5.00D Lens Diameter = 60mm Learner options Place an X in the box to the left of the										
Curvature = 5.00D Lens Diameter = 60mm Learner options Place an X in the box to the left of the	What is the sagittal depth of a surface with the following characteristics?									
Place an X in the box to the left of the										
correct answer(s). C * + 5.9 mm Delete unused choices and text.										

Topic	Sagi	ittal Forr	mula	Oiji	
Screen ID			Template	Multiple Choice with Single Correct Answer	205,
Learner Action Lea		Learner	Feedback		Programming Instructions/ System Response
Click all answe	rs	CA	Correct.		Click NEXT and branch to next page
then click Subn	mit. WA		Incorrect.		Show ticks and crosses next to option. Click NEXT and branch to next page

Topic	- Sagretar romana						adili		
Screen	Screen ID Multiple Choice with Single Correct Answer								
Screen	Conte	ent					800		
Title	Ques	stion (3				chille Children and the		
Prompt	Sele	ct the	bes	t ansı	ver t	then click Su	ıbmit.		
Text	Whi	ch of	the	follov	wing	has the MO	OST impact on the thickness of a lens?		
Learne	r opti	ons					*O		
D/		41 1-			Α	Index of	refraction		
Place a to the l			OX		В	Lens colo	r end we have		
correct).	X	e (dioptric) power				
					D	Base curv	Base curvature		
Delete					O' Eigh Mai				
choices	s and i	text.					hiscuis et Ade		
Le arne	r Actio	on	Lea	ner F	eed	back	Programming Instructions/ System Response		
Click all			CA		Corr	rect.	Click NEXT and branch to next page		
then click Submit. WA Incorrect.					Show ticks and crosses next to option. Click NEXT and branch to next page				
						ada ate of			
Topic	Topic Sagittal Formula &								

Topic		Sagittal Formula &						
Screen	ID	Template	Multiple Choice with Single Correct Answer					
Screen	Conte	ent in "						
Title	Ques	tion 4						
Prompt	Selec	ct the best answer then click Su	ıbmit.					
Text	Maxi	imum thickness in minus lenses is evident at the						
	No	eids						

Topic	Sagitt	al For	mula						. Pois
Screen ID				Template	Multiple	Choice with	Single Corr	ect Answer	2051
Learner option	ons	<u> </u>							30,
			Α	Optical c	enter				2000
Place an X in to the left of		X	(B	Edge					
correct answ			С	Zero cen	ter				ETT CONTROL OF THE PARTY OF THE
	(3):		D	Central r	nidpoint				O.C.
	Delete unused choices and text.								and the state of t
Learner Action	on Le	arner	Feed	dback				235	Programming Instructions/ System Response
	Click all answers CA		Cor	rect.				", ¹ /1/6"	Click NEXT and branch to next page
then click Subr	nit. W	A	Inc	orrect.			V _C	college	Show ticks and crosses next to option. Click NEXT and branch to next page
Tonic	Cagitt					. 0	7,0		

Topic		Sagitta	l Formula	3	90				
Screen	ID		Template Multiple Choice with Single Correct Answer						
Screen	creen Content								
Title	Quest	ion 5			Dro. Follogo				
Prompt	Select	the bes	st answer	then click S	ubmit.				
Text	Giver	the fo	lowing ir	nformation,	what is the radius of curvature for this surface?				
	Lens	Materia	er = 6.00 I = CR-3	9 (1.50 indo	ex) roj _{ics}				
Place a to the l correct Delete	Place an X in the box to the left of the correct answer(s). Delete unused choices and text. A * 72.2mm X B * 83.3mm C * 94.4mm D * 105.5 mm								
Learne	rner Action Learner Feedback Programming Instructions/ System Response								

Learner Action	Learner	Feedback	Programming Instructions/ System Response
Click all answers	CA	Correct.	Click NEXT and branch to next page
then click Submit.	WA	Incorrect.	Show ticks and crosses next to option. Click NEXT and branch to next page
M			

Topic	-	Toric Tr	anspo	sition		,8¢°				
Screen				Template Multiple Choice with Single Correct Answer						
Screen	Screen Content									
Title	Questi	on 6				Office				
Prompt	Select	the bes	st ansv	wer then click S e	ubmit.	00				
Text	How is	s spect	acle le	ens power achi	eved?	ijor				
Place a to the l correct Delete choices	Place an X in the box to the left of the correct answer(s). Delete unused choices and text. X A By combining surfaces with different curvatures B By combining identical surface curvatures C By increasing the diameter of the lens D By decreasing the diameter of the lens									
Learne	r Actior	Lea	rner F	eedback	ands are not	Programming Instructions/ System Response				
	l answers CA			Correct.	PO 200	Click NEXT and branch to next page				
then clic	k Subm	it. WA		Incorrect.	Orah Jesion an denda	Show ticks and crosses next to option. Click NEXT and branch to next page				
Topic	Γ-	Toric Tr	anen	osition	Sold disco Draft Res					

Topic	Toric T	Toric Transposition							
Screen	en ID Template Multiple Choice with Single Correct Answer								
Screen	Screen Content								
Title	Question 7	Question 7							
Prompt	Select the be	st ansv	ver th	en click Su	ubmit.				
Text	Transpose t	ne follo	wing	Rx into m	ninus cylinder form:				
	+1.00 +2.5	0 ×090		enda					
Learne	r options		. 500	,					
		×	Ä	+1.00 -2	.50 x090				
	Place an X in the box to the left of the			+3.50 -2	.50 x090				
	t answer(s).	X	С	+3.50 -2	.50 x180				
007700			D	+1.00 -2	.50 x180				
	unused Solution and text.								

Topic	Toric Trans	ric Transposition								
Screen ID		Template	Multiple Choice with Single Correct Answer	205,						
Learner Action	n Learne	r Feedback		Programming Instructions/ System Response						
Click all answer		Correct.		Click NEXT and branch to next page						
then click Subm	it. WA	Incorrect.		Show ticks and crosses next to option. Click NEXT and branch to next page						

Topic	То	ric Trans	sposition					
Screen								
Screen	Content		<u> </u>	*(C)E				
Title	Question	า 8		OLS.				
Prompt	Select th	ne best ar	nswer then click S i	ubmit.				
Гехt	Lens clo	ens clock reading above the segment: + 6.00						
Learner options Place an X in the box to the left of the correct answer(s). Delete unused choices and text. Learner options A * - 4.00 diopters X B * + 2.50 diopters C * + 3.00 D * + 2.00 diopters				diopters discuss All All All All All All All All All A				
Le arne	Programming Instructions/ System Response							
	ick all answers CA		Correct.	Click NEXT and branch to next page				
then clic	k Submit.	WA	Incorrect.	Show ticks and crosses next to option. Click NEXT and branch to next page				

			AVI							
Topic		Toric Transposit	oric Transposition							
Screen	ID	Template Multiple Choice with Single Correct Answer								
Screen	Conte	nt kaill								
Title	Quest	tion 900								
Prompt	Selec	elect the best answer then click Submit .								
Text	Trans	pose the followi	ing Rx into p	lus cylinder form:						

Topic	Tor	ic Tra	ansp	ositio	n					30/1/2
Screen ID					emplate	Multiple C	Choice with	า Single Cor	rrect Answer	20516
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Place an X in to the left of correct ans Delete unus choices and	n the lefthe wer(s		X	A B C D	-5.00 +1 -5.00 +1	.50 x045 .50 x045 .50 x135 .50 x135			S. C.	or offical by the state of the
Learner Act		Lea	rner	Feedb	ack				anstrued as	Programming Instructions/ System Response
Click all answ		CA		Corre	ect.				6.	Click NEXT and branch to next page
then click Submit. WA I					rect.		88	notio	Ž,	Show ticks and crosses next to option. Click NEXT and branch to next page
							delle	, all		
Topic	Tor	ic Tr	ansp	ositio	n		K PS	3170		
Screen ID				T	emplate	Multiple 0	Choice with	n Single Cor	rrect Answer	

Topic	٦	oric Tra	ansposit	tion	ELPS ONO				
Screen		Template Multiple Choice with Single Correct Answer							
Screen	Conten	t			155 delle				
Γitle	Questi	on 10			Nigot & Po				
rompt	Select	the bes	t answer	then click Su	ubmit. of				
Гехt	Lens c	lock rea	ading of	f front side o	culate the power of a lens based on the following lens clock readings. of lens: + 6.00				
Place a to the l correct Delete	Lens clock reading back side of lens: - 4.00 carner options ace an X in the box the left of the orrect answer(s). elete unused oices and text.								
Le arne	er Action	Leai	Co	rrect.	Programming Instructions/ System Response Click NEXT and branch to next page				
	Majer	70							

Topic	Torio	Transp	ositi	ion		·loiji.
Screen ID				Template	Multiple Choice with Single Correct Answer	202,
Click all answe then click Subr		WA	Inc	orrect.		Show ticks and crosses next to option. Click NEXT and branch to next page

						:0'			
Topic	oic ANSI Standards			ds					
Screen I	Screen ID			Te	emplate	Multiple Choice with Single Correct Answer			
Screen C	ontent			_		⁵			
Title	Ques	tion 11				Leb Comment of the Co			
Prompt	Selec	t the bes	st answ	ver th	hen click S	ubmit.			
Text	Whic	h of the	follow	ving	are respo	nsibilities of ANSI?			
Learner	er options and the second seco								
		_		Α	A Establish tolerances based upon human visual perception limits				
Place an to the let				В	Establish regulations regarding the manufacture of ophthalmic goods				
correct a		_	X	С	Define re	ealistic tolerances based upon current manufacturing capabilities			
0077 000 0				D	Legislatir	ng standards for imported products coming into the country			
	Delete unused choices			-		010 ion 380			
and text.						"SCILS" A ROBIN			
Program	ming I	nstruction	ons/ S	yste	m Respon	se Move to next frame			

Topic	ANSI S	tandar	ds di ^l							
Screen ID				Template Multiple Choice with Single Correct Answer						
Screen Co	Screen Content									
Title	Question 12									
Prompt	Selec	ct the bes	st answe	er then Click Submit .						
Text	Whic	ch aspect	t of ANS	SI standards is federally regulated?						
Place an a to the left correct and Delete un and text.	X in the state of the same of	ne box ne r(s). choices	X [Cosmetic conformity B Optical tolerances C Progressive corridor length D Impact resistance						
Programi	Programming Instructions/ System Response Move to next frame									

						noix.			
Topic	/	ANSI St	andaı	rds		0051			
Screen I	D			Ter	nplate	Multiple Choice with Single Correct Answer			
Screen C	ontent					\$0°0			
Title	Quest	tion 13				c.cal v			
Prompt	Select	the bes	st ansv	ver(s) i	then click	ck Submit.			
Text	Which	n of the	follov	wing a	re the st	standards for high impact eye wear?			
Learner	options								
		_		A	1 inimum	m thickness of 3.5mm			
Place an to the lef				В (Capable	e of resisting impact from a 2.0" steel ball traveling at 500 feet per second			
correct a			X	C I	Marked v	with manufacturer's trademark and a 🔠 after the trademark			
				D	Made form CR-39 material				
Delete unused choices									
and text.									
Program	ming Ir	nstruction	ons/S	System	Respon	nse Move to next frame			

Topic ANSI Standards Screen ID Template Multiple Choice with Single Correct Answer Screen Content Title Question 14 Prom Select the best answer then click Submit. Text What is the optical tolerance for sphere and cylinder powers for most prescriptions?	i rogramming	THIS C. GCCIC	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	stem itespon	ise Place to lieat I dille				
Screen Content Title Question 14 Prom pt Select the best answer then click Submit. Text What is the optical tolerance for sphere and cylinder powers for most prescriptions?									
Screen Content Title Question 14 Prom Select the best answer then click Submit. pt Text What is the optical tolerance for sphere and cylinder powers for most prescriptions?	Topic	ANSI Sta	andard	S					
Title Question 14 Prom Select the best answer then click Submit. Text What is the optical tolerance for sphere and cylinder powers for most prescriptions?	Screen ID			Template	Multiple Choice with Single Correct Answer				
Prom Select the best answer then click Submit. Text What is the optical tolerance for sphere and cylinder powers for most prescriptions?	Screen Conter	nt		_	Die ion op				
Text What is the optical tolerance for sphere and cylinder powers for most prescriptions?	Title Quest	ion 14			cuss Not.				
	_								
Lagrance entitions	Text What	is the opt	ical tol	erance for sp	ohere and cylinder powers for most prescriptions?				
Lear ner options	Learner option	าร			*06				
A 0.01D			<i> </i>	0.01D	80				
Place an X in the box B 0.08D			Е	0.08D					
to the left of the Correct answer(s). X C 0.120			Х	0.120					
D 0,25D				0,25D					
Delete unused choices and text.									
Programming Instructions / System Response Move to next frame	Programming	Instruction	ons/ Sy	stem Respon	se Move to next frame				
j.ir."			110						

Topic	ANSI Standard	ANSI Standards							
Screen ID	, tall	Template	Multiple Choice with Single Correct Answer						
Screen Conten	t								
Title Que	stion 15								

•	Горіс		ANSI Standards								
	Screen II)			7	Template	Multiple Choice with Single Correct Answer				
	Prompt	Select	t the bes	st ansı	ver t	then click S i	Submit.				
	Text	What	is the A	s the ANSI designation for standards related to safety eyewear?							
I	Learner o	ptions	5			_	, c.C [®]				
	D/	V : 44-			Α	Z80.1					
	Place an X in the box to the left of the				В	Z80.7	, o'				
	correct a			X	С	Z87	alio"				
			(-):		D	Z89	dille				
	Delete un	choices				a constant of the constant of					
ة	and text.					A STATE OF THE STA					
I	Program	ming I	nstructi	ons/S	Syste	em Respons	nse Move to next frame				

Topic **ANSI Standards Screen ID Template** Multiple Choice with Single Correct Answer **Screen Content** Title Question 16 **Prompt** Select the best answer then click **Submit**. Text What is the tolerance for axis for a lens having 0.25D cylinder power according to ANSI Z80? Learner options ±2° Place an X in the box ±5° В to the left of the ±7° correct answer(s). Χ ±14° D Delete unused choices and text. **Programming Instructions/ System Response** Move to next frame

Topic	NSI Standards						
Screen ID	Template Multiple Choice with Single Correct Answer						
Screen Conte	nt air						
Title Qu	estion 17						
Prompt Sel	lect the best answer then click Submit .						

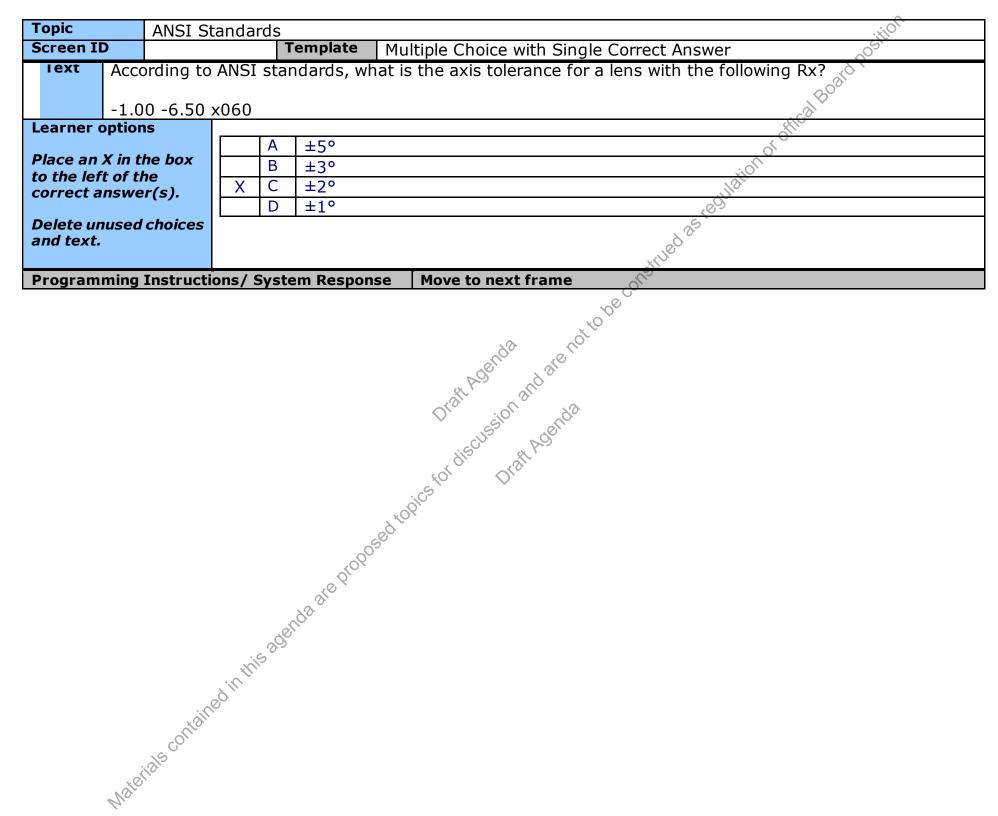
Topic	ANSI Sta	anda	rds		ido ^C				
Screen ID			Т	emplate	Multiple Choice with Single Correct Answer				
		f the following statements is true regarding eyewear that falls outside established ANSI tolerances all power?							
Learner options	5	1							
5 1 3 2			Α	It is illega	al to dispense the eyewear to a consumer in the United States				
Place an X in the to the left of the			В	The cons	umer must be informed the lenses do not meet ANSI tolerances				
correct answer			С	It is legal	to dispense the eyewear if the consumer signs a waiver				
	(3).	Χ	D	It is legal	to dispense the eyewear				
Delete unused of and text.	choices		•		, 25 (8)				

and text.	seu choices		A 25 16 3
Programm	ing Instructions/ Sy	stem Respons	se Move to next frame
			Se Move to next frame Draft Adenda Draft Adend
Topic	Sagittal Formu		to Die
Screen ID		Template	Multiple Choice with Single Correct Answer
Screen Cor			70,
	Question 18	Ç	
Prompt	Select the best answ	er then click S i	ubmit.
F	What is the center to the surface sagitted as the surf	al depth = 8.4 Depth = 6.2	

Topic	Sagittal	Sagittal Formula							
Screen ID	_			Template	Multiple Choice with Single Correct Answer	205			
Learner option	IS					,8			
5. 3. 3. 1.			Α	2.2mm		200			
Place an X in the to the left of the	he	X	В	3.2mm		- 63			
correct answe			C	5.2mm	<u> </u>				
			D	7.4mm					
Delete unused	choices				noit,				
and text.					on the second se				
Programming	Programming Instructions / System Response Move to next frame								

og. a	9	oti actioi		, 5.0.	iii Kespoii	hise Piove to heat It aime		
Торіс	S	Sagittal I	 Formι	ula				
Screen II					emplate	Multiple Choice with Single Correct Answer		
Screen Co	ontent					, c		
Title	Questi	ion 19						
Prompt	Select	the best	answ	er th	en click S	Submit.		
Text	Which	of the f	follow	ing i	s a true s	statement regarding allens with the following characteristics?		
	Back s		sagitt	al de	epth = 5. epth = 8. mm			
Learner d	ptions					of Or Orall		
D/	V : #		X	Α	This is a	a minus powered (diverging) lens		
Place an . to the lef				В	This is a	a plus powered (converging) lens		
correct a				С	This is a	a plano powered (no power) lens		
				D By definition, this lens must have prism				
Delete un and text.	noices			ale blok	₹ 			
Program	ming In	structio	ns/ S	yste	m Respon	nse Move to next frame		
			6	30°				
Topic	А	NSI Sta	ındarı	ds				

Topic	ANSI Standard	NSI Standards						
Screen II	0	Template	Multiple Choice with Single Correct Answer					
Screen Co	ontent							
Title	Question 20							
Prompt	Select the best answ	ect the best answer then click Submit .						



Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Sent: Tuesday, February 13, 2024 6:02 PM

To: Shoven Paige Subject: **ABO Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS

217 N. Upper Street, Suite 201

Lexington, KY 40507

703-719-5800 • 800-296 • Veb Andress:

Dear Walter,

This letter will confirm that the American Board of Opticianry Education Committee approved the following online course:

Course: Lensemetry

Designation: Ophthalmic Level I

Course Number: STWEOA123-1

Expires: February 5, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

, scitica.com. You are necessing this amail because you submitted a course for approved global bands.

The standard of the course for approved global bands and the course global bands and the course gl

Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Tuesday, February 13, 2024 6:14 PM Sent:

To: Shoven Paige

Subject: **NCLE Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS

217 N. Upper Street, Suite 201

Lexington, KY 40507

703-719-5800 • 800-296.

Dear Walter,

This letter will confirm that the National Contact Lens Examiners Education Committee approved the following online course:

Course: Lensemetry

Designation: Ophthalmic Level I

Course Number: CTWEOA004-1

Expires: February 5, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

, scitica.com. You are necessing this amail because you submitted a course for approved global bands.

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To Whom It May Concern,

Jer of Jest the state of the st

CEC: LENSOMETRY

LENSOMETRY covers the following areas:

- 1. Lensometry Explain the purpose of a lensometer and know the parts of a lensometer. Learn the different parts of a lensometer and the functionality of each part. Learn how to use and operate a lensometer to verify a prescription.
- 2. Lensometry 2 Describe how a lensometer is used to measure Sphere Power, Cylinder Power, and Prism. Learn and the steps for operating a lensometer to perform these measurements
- 3. Lensometry 3 Learn and know how to identify Single Vision Spherical lense and Single Vision Cylindrical lenses using a lensometer. Determine add powers for flat top multifocals and locate power in progressive lenses.
- 4. How to Use An Autolensometer This course provides information on how to use an autolensometer to measure the power of a lens. It reviews the different parts of an autolensometer and key steps for using this instrument with patients.

Course outline/timing: Total 60 minutes

- 1) Lensometry
- 2) Course Objectives
 - a) Describe how a lensometer is used to measure Sphere Power, Cylinder Power, and Prism
 - b) Describe the steps for operating a lensometer to perform these measurements
- 3) Using a Lensometer
 - a) What is a Lensometer?
 - i) Measure spherical power
 - ii) Measures cylindrical power and axis
 - iii) Measures the optical center of a lens
 - iv) Determines the degree and direction of prism
 - v) Is capable of marking the center of the lens and various other measurements critical to proper lens performance
 - b) By measuring the lens properties and comparing this to the written prescription, you can determine if:
 - i) The lenses do not match the prescription and need to be remade
 - The lenses match the prescription and the patient needs to be re-examined for a new prescription
- LENSOMETER PARTS AND FUNCTIONALITY
 - a) Parts of a Lensometer
 - i) Adjustable Eyepiece
 - ii) Auxilary prism ring
 - iii) Lens Holder
 - (iv) Axis Wheel
 - v) Power Drum
 - vi) Spotting Device
 - vii) Lens Table/Stage
 - viii) The Reticle
 - ix) The Target
 - **OPERATING A LENSOMETER**
 - a) Using a Lensometer you can measure:
 - i) Sphere power of a lens
 - ii) Cylinder power of a lens
 - iii) Axis location of the cylinder power
 - iv) Optical Center of a lens
 - v) Prism location
- VERIFYING A PRESCRIPTION
 - a) Verifying a prescription using a lensometer

aterials contain

erical power cylindrical power and axis, optical

isop parts, including the: adjustable eyepiece,
axis wheel, power drum, spotling devise, and lens table
adjustable eyepiece,
axis wheel, power drum, spotling devise, and lens table
adjustable on the adjustable eyepiece,
axis wheel, power drum, spotling devise, and lens table
adjustable on the adjustable of the control of the cont

Course Outline / Timing

- Lensometry 2 8)
- 9) Course Objectives
- 10)
- a) By measuring the lens properties and comparing them to the written prescription, you can determine if:

 i) The lenses do not match the prescription and need to be remade

 ii) The lenses match the prescription and the period.

 The lenses match the prescription and the period.

 - construed as regulation of

LENSOMETRY 2 - INTRODUCTION AND OBJECTIVES 11)

- a) You will learn how to use a lensometer to:
 - i) Measure the spherical power of a lens
 - ii) Measure cylindrical power of a lens
 - iii) Measure Prism
- b) Parts of a Lensometer
- c) Steps for Focusing the Eyepiece
- 12) MEASURING THE LENS
 - a) Steps for measuring the spherical power of a lenso
 - b) Steps for measuring the cylindrical power of a lens
- PLUS OR MINUS CYLINDER FORM 13)
 - a) Rotating the power drum of the lensometer clockwise will result in minus cylinder
 - b) Rotating the power drum counterclockwise will result in plus cylinder power
- Prism An Introduction 14)
 - a) Prism Directions
- m Directions
 i) Base In (BI) If the target is towards the nose it is prism Base In
 - ii) Base Out (BO) If the target is towards the ear, it is prism Base Out
 - iii) Base Up (BU) If the target is up, it is prism Base Up
 - iv) Base Up (BU) If the target is up, it is prism Base Up
 - b) How to Measure Prism With a Lensometer
- Key Takeaways 15)

Materials contained in t

- a) Using a lensometer, you can measure sphere power of a lens, cylinder power of a lens, axis location of the cylinder power, optical center of a lens, and prism location
- b) The first step before marking any measurement using a lensometer is to focus the evepiece
- Cylinder form can occur in either plus or minus form
- d) Prism lenses are usually used to correct a muscle imbalance between the two eyes
- e) There are four basic prism directions: base in, base out, base up, and base down

Course Outline / Timing

- 16) Lensometry 3
- 17) Course Objectives
 - Identify Single Vision Spherical Lenses
 - b) Identify Single Vision Cylindrical Lenses
 - Determine Add Powers for Flat Top Multifocals
 - d) Locate Power in Progressive Lenses
- 18) **OPTICAL MEASUREMENTS**
 - a) There are three types of measurements with a lensometer
 - i) Sphere Power
 - ii) Cylinder Power
 - iii) Prism
 - b) Optical Measurements
 - i) Identifying Single Vision Spherical Lenses

 - Identifying Single Vision Cylindrical Lenses

FLAT TOP MULTIFOCALS AND PROGRESSIVE LENSES 19)

- a) Determining Add Powers for Flat Top Multifocals
- al ensometer

 aurements

 ntifying Single Vision Spherical Lenses

 (1) How you can verify single vision spherical lenses for optical quality.
 ntifying Single Vision Cylindrical Lenses

 (1) How to verify single vision cylindrical lenses for optical quality.
 ILTIFOCALS AND PROGRESSIVE LENSES

 Add Powers for Flat Top Multifocals

 to verify finished eyewear with flat

 ver in Progressive Lenses

 to verify finished execution. i) Steps to verify finished eyewear with flat top multifocal lenses.
- b) Locating Power in Progressive Lenses
 - i) Steps to verify finished eyewear with progressive lenses.
- 20) **Key Takeaways**
 - a) Identify Single Vision Spherical Lenses

 - c) Determine Add Powers for Flat-Top Multifocals

Lenses Le

How to Use An Autolensometer 21)

- 22) Course Objectives
 - a) Identify the different parts of an autolensometer
 - b) Describe and demonstrate how to operate an autolensometer
 - c) Understand how to measure lenses and contact lenses
- 23) WHAT IS AN AUTOLENSOMETER?
 - a) The different parts of an autolensometer
 - Screen i)
 - ii) Lens holder
 - Marking pens iii)
 - Nosepads iv)
 - v) Lens plate lever
 - vi) Lens stand
 - vii) Marking lever and pens
 - b) How to measure a lens using an autolensometer
 - i) Position the frames or the lens on the lens holder
 - c) Reading the measurements on the screen
 - i) The different sections of the screen
- as regulation or offical Board position (1) At the center is the cross cursor. This is the target you want to aim for to correctly position the lens on the autolensometer
 - (2) On each side of the center target are the measurements information, separated from left to right eye. This information includes sphere, cylinder, axis, and addition powers. As well as monocular and binocular pupillary distances
 - (3) Depending on the model you use additional information will be available to you, including an indication of which lens you are measuring, singlevision or progressive lens measuring target, print options...
 - Positioning the lens to gain full alignment
 - (1) Place the lens on the lens stand. Move the lens to bring the cross cursor in alignment with the target on the screen. A message or a visual cue (target changing color) will appear when the alignment is complete. Once you have the expected alignment, lower the lens holder slowly, and stabilize the lens.
 - (2) If you are measuring a single lens or the right lens of a frame, the data appears on the right side of the screen. If you are measuring a left lens,
 - (3) The autolensometer will automatically measure and display the sphere. cylinder, and axis. If there is a prism in the lens, the information will be
 - (4) Once you have measured one lens, save the measurements, and switch to the other lens. When you are finished, raise the lens holder to release
 - (5) Repeat the same process for the second eye to complete the
 - - - (1) Center the lens in this area to measure the near ADD power of the right
 - (2) Center the lens in this area to measure the near ADD power of the left
 - - (1) Center the lens in this area to measure the prism of the left lens.
 - (2) Center the lens in this area to measure the prism of the right lens
 - - (1) Center the lens in this area to measure the distance vision power of the
 - (2) Center the lens in this area to measure the distance vision power of the right lens.

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Jautomatically displayed.

Once you have measured one lens, save the
to the other lens. When you are finished, rai
the lens.

(5) Repeat the same process for the second eye
measurements.

(b) How to measure a Progressive Lens with an autolensometer
i) Near ADD Power

(c) Center the lens in this area to measure the
lens.

(d) Prism

(e) Center the lens in this area
(f) Prism

(g) Center the lens in this area
(h) Prism

(h) Company the prism of the p

- iv) Measuring the ADD power with a regular target
 - (1) By positioning the near vision zone on the lens pad, you can also measure the addition power of the lens. Save the ADD power for each lens, once you have measured it.
- v) Measuring with the progressive lens design visualization mode
- ion of official Board position (1) Some autolensometers models have a separate visualization mode for progressive lenses (which may automatically appear if a progressive is detected). This mode guides you in the measurements of both distance and near vision, with the help of a progressive lens design shape.
- e) Marking Lenses with An Autolensometer
 - i) Place the lens on the eyeglass table
 - Position the lens using the cross on the screen
 - iii) Press the marking lever, and mark the lenses with the marking pens

24) MEASURING A CONTACT LENS WITH AN AUTOLENSOMETER

- a) Newer models of autolensometers allow you to measure contact lenses
- b) Neutralizing a contact lens
 - i) Adjust your instrument settings
 - (1) Change your instrument settings to accommodate the devices ability to read the power of the hard/soft contact lens. (Reference the instruments user manual as needed
 - (2) Change and replace the lens stand
 - (a) Change the lens stand to the accompanying contact lens stand.
 - (3) Prepare the Lens
 - (a) Remove the water or moisture from the lens, and set it on the stand with paying attention not to distort it. Then, take a measurement quickly.
 - (4) Measuring the Contact Lens
 - (a) Set the contact lens on the contact lens stand, and adjust the lens placement as needed.
 - (b) Lower the lens holder, and hold the contact lens stand which the contact lens is already placed to allow the instrument to verify the power.
- 25) Key Takeaways
 - a) An autolensometer will help you measure the properties of your patients' eyeglasses, and not only compare them to the written prescription, but also check for fitting measurements. Doing so, you will identify potential inaccuracies in the fitting measurements and lens power that would warrant a lens remake
 - b) Autolensometers allow you the ability to measure all lens designs (cut and uncut); Single-vision, progressive, and multifocal. For lenses mounted in the frame, you can measure fitting heights, and pupillary distances (monocular and binocular)
 - To properly measure eyeglasses, first position the eyeglasses (oriented up) so that the bottom edge is in contact will the lens plate, and centered with the nose pad. Carefully place the lens on the lens pad. Move the lens to bring the cross cursor in alignment with the target on the screen. A message or a visual cue (target changing color) will appear when the alignment is complete
 - d) Newer models of autolensometers allow you to measure the power of contact lenses, as well as the UV transmittance and blue light absorption properties of your patients' eyeglasses

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Cours	Lensometry	Module	Lensometry	Modu	ile #	
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Topic		Lensome	etry						
Screen ID			-	7	Template	Multiple Choice with Single Correct Answer			
Screen Co	ntent								
Title	Quest	tion - 1				(S)			
Prompt	Selec	t the bes	st ansv	ver t	hen click S ı	ubmit.			
Text	Which	n of the f	followi	ng is	the function	on of the power drum on a lensometer?			
Learner o	ptions								
	X in the box		Α	Used to s	spot the optical center and 180° line on the lens				
		X	В	Used to fo	ocus the target image and to indicate the power values of the lens				
to the left				С	Used to o	prient the target in order to determine the location of the cylinder power			
correct ar	iswer(S <i>).</i>		D	All of the	above			
Delete un and text.	used c	hoices				Oratt Age. Or and all			
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	discr district				
Topic	Lensometry				
Screen ID	Template Multiple Choice with Single Correct Answer				
Screen Co	ontent (Text may be limited.)				
Title	Question - 2				
Prompt	Select the best answer then click Submit .				
Text	Moving the power counter-clockwise results in				

Cours e	Lensome	try				Module	Lensometry			Module #	
Topic		Lensome	etry						offic		
Screen				Т	emplate	Multiple	Choice with Sing	le Correct Answer	o ^k		
Learne	er option	S			1 .				,;o ⁽¹		
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	left of th			В	Minus po				0		
	t answei			С	Cylinder	power		8			
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Topic		Lensom	etry				and to				
Screen	ı ID			T	emplate	Multiple	Choice with Sing	le Correct Answer			
Screen	Conten	t (Text ma	ay be I	imite	ed.)			^			
Title	Que	stion - 3				\Diamond) siot and	O. C.			
Prom	npt Sele	ct the bes	st ansv	ver tl	hen click S	ubmit.	CITY ADE				
Text	The	plus pow	ver on	the	power dr	um is indi	icated by the	scale.			
Learne	er option				<u>'</u>	5/0), <u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>				
	•			Α	Red	aoios					
	an X in ti		X	В	Black	7,0,					
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Cours	Lensometry	Module	Lensometry	Module #	
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Topic		Lensom	etry											
Screen ID				٦	Γemplate	Multiple Choice with Single Correct Answer								
Title	Ques	tion - 4												
Prompt	Selec	ct the bes	st ansv	ver t	then click Su	ubmit.								
Text	Cylir	nder pow	er cai	er can be recognized in a lensometer if all of the lines of the target are										
Learner o	ptions	3												
				Α	In clear t	focus at the same time								
				in the box								В	In clear t	focus at different times
to the left			X	С	Not in cle	ear focus at the same time								
correct ar				D	None of	the above								
Delete un and text.	Delete unused choices			NO NOTE										
and text.					Delice Miles									
Programn	ning I	nstructio	ns/ Sy	ster	m Response	Move to next frame								

Topic	L	<u>.ensomet</u>	ry						
Screen 1	ID		Template	Multiple Choice with Single Correct Answer					
Screen	Screen Content (Text may be limited.)								
Title	Questi	Question - 5							
Promp	Select	the best a	answer then click	Submit.					
Text	Spher	Sphere power can be recognized in a lensometer if all of the lines of the target areat the							
	same	time.	.6						
Learner	Learner options		Pla						

Place an X in the box to the left of the correct answer.

Delete unused choices and text.

A Parallel
B Perpendicular
Con In aspherical focus
x D In clear focus

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Cours	Lensometry	Module	Lensometry	Module	#	
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Topic Using a Lensometer 2						Ol Ol
Screen ID)	_			Template	Multiple Choice with Single Correct Answer
Screen Co	ontent	(Text ma	y be	limit	ed.)	
Title	Ques	tion - 6				(S)
Prompt	Selec	t the bes	t ansı	ver i	then click Su	ubmit.
Text	What	t is the p	rism	dire	ection wher	the target is directed towards the ear?
Place an X in the box to the left of the correct answer. Delete unused choices and text.			X	A B C D	Base in Base out Base up Base dov	
Programm	ning Ir	nstructio	ns/ Sy	yste	m Response	Move to next frame
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Topic		Using a	Lens	ome	ter 2	

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T	Topic Using a		a Lensometer 2	
S	creen ID		Template Multiple Choice with Single Correct Answer	
S	creen Co	ntent (Text	may be limited.)	
	Title	Question -	7	
	Prompt	Select the	best answer then click Submit .	
	Text	What purp	ose does prism serve in a lens?	
L	earner o	ptions		
			A Corrects hyperopia	
		(in the box	B Corrects presbyopia	
	o the left orrect an		x C Corrects a muscle imbalance between the two eyes	
	orrect an	isver.	D None of the above	
Delete unused choices				
a	nd text.	ar an	all Control of the Co	

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Topic	Using a Lensom	neter 2			FILE
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9	Screen ID					Femplate	Multiple Choice with Single Correct Answer
9	Screen Co	ntent (Text ma	y be l	limit	ed.)	
	Title	Questi	on - 8				CSIT CONTRACTOR OF THE CONTRAC
	Prompt	Select	the bes	t ansv	ver t	then click Su	ıbmit.
	Text	How d	lo you i	meas	ure	a plus cylir	der power?
L	earner o	ptions				_	
_			_		Α	By rotati	ng the power drum clockwise after focusing the sphere mires
	Place an)		box	X	В	By rotati	ng the power drum counter-clockwise after focusing the sphere mires
	to the left of the correct answer.				С	By rotati	ng the power drum and cylinder axis wheel at the same time
				D By turning the eyepiece clockwise after rotating the power drum clockwise			
	Delete unused choices and text.						discus Att Mos.

Topic	Using a Lensometer 2							
Screen ID	Template Multiple Choice with Single Correct Answer							
Screen Conto	Screen Content (Text may be limited.)							
Title Q	uestion - 9							

Move to next frame

Prompt Select the best answer then click **Submit**.

Text How is prism observed in a lens when using a lensometer?

Programming Instructions/ System Response

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Cours	Lensometry	Module	Lensometry	Module #	
e				00	

Topic	Using a	Lenso	meter 2	ELIE OF			
Screen ID			Template	Multiple Choice with Single Correct Answer			
Learner options				,,,0/,			
		X	A By the d	lisplacement of the target center			
Place an X in the			B When the sphere lines are out of focus				
to the left of the correct answer.			C When the cylinder lines are out of focus				
correct unswerr		D When all lines of the target are in focus					
Delete unused choices and text.							
				e Co			
Programming In	Programming Instructions/ System Response Move to next frame						

Topic Using a Lensometer 2						Silve Me
Screen II				Те	mplate	Multiple Choice with Single Correct Answer
Screen Co	ontent (Text ma	y be li	imited	l.)	
Title	Questi	ion - 10				O' Esio, Sugar
Prompt	Select	the besi	t answ	er the	en click S u	ubmit.
Text	On th	e power	r drun	n, the	red scal	e indicates power, while a black scale indicates
	powe	r.				
Learner o	ptions					
_,				Α	Plus, min	nus
Place an . to the lef			X	В	Minus, p	lus
correct a				С	Add, sub	tract
COTT CCC U.				D	Plus, pos	sitive
Delete unused choices				V.		
and text.			Silve).c		
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Topic	Using a Lenson	Using a Lensometer 3							
Screen ID	* diffe	Template	Multiple Choice with Single Correct Answer						
Screen Content (Text may be limited.)									

Cours	Lensometry	Module	Lensometry	Module #	
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1	opic		Using a	Lens	ome	eter 3	Ellis Control of the
S	creen ID					Template	Multiple Choice with Single Correct Answer
	Title	Ques	tion - 11				
	Prompt	Selec	t the bes	t ans	wer	then click S	ubmit.
	Text						cylindrical lens you realize that the sphere lines are broken. You know
		that	this will	indic	ate	that the ax	is is not exact. What will you do next?
L	earner o	ptions					
					Α	Adjust th	ne power drum until the cylinder lines of the target are sharply focused
	lace an)			X	В	Adjust th	ne axis wheel until the cylinder lines are no longer broken
_	o the left orrect an				С	Adjust th	ne power drum to focus the eye piece
	orrect ar	.s.v.c.r			D	None of	the above
L	elete un	used c	choices				
a	nd text.						
F	rogramn	ning Ir	nstructio	ns/ S	yste	m Response	e Move to next frame.⊘

i i ogi aiii	9 1.	isti actioi	13/ 3)	, 5001	ii ixesponse	i hove to next name.
Topic		Using a	Lenso	ome	ter 3	
Screen I	D			7	Γemplate	Multiple Choice with Single Correct Answer
Screen C	ontent	(Text ma	y be l	limit	ed.)	cs The second se
Title	Ques	tion - 12				
Prompt	t Selec	t the bes	t ansv	ver t	hen click S	ubmit.
Text	While	e identify	ing S	Singl	le Vision \$	pherical Lenses, the lens must be flush against the to
	accu	rately de	term	ine l	lens power	and prism.
Learner	options					
		_	Χ	Α	Pens sto	р
Place an				Be	Clamp	
to the let			+, (Le S	Prism loc	cator
correct a			ill	D	None of	the above
Delete u		choices	911,	•	•	
and text.		in	5			
		XO.				l l

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Cours	Lensometry	Module	Lensometry	Module #	
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Topic	Using a Lensom	neter 3		FILE	
Screen ID		Template	Mul	tiple Choice with Single Correct Answer	
Programming 1	Instructions/ Syst	em Response		Move to next frame	

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1	opic	l	Jsing a	Lenso	mete	er 3	, & O		
9)	Screen ID				Te	emplate	Multiple Choice with Single Correct Answer		
Screen Content (Text m			Text ma	ay be li	mite	d.)			
	Title	Questi	on - 13				nestro		
	Prompt	Select	the bes	st answ	er th	en click Su	bmit.		
	Text	What	do you	need	need to analyze to be able to verify lenses with more than one optical center, such as				
		multif	ocal ler	nses?		•			
L	earner o	ptions							
					Α	Prism pov	ver 🔑 🔊		
	Place an >		box		В	Only the	distance power		
	o the left correct an			X	С	The dista	nce power and add power		
	orrect an	.s.ve.r			D	Only the	add power were also and power with the same and power and the same and		
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Programming Instructions/ System Response Move to next frame

Topic		Using a Lensom	neter 3 🦽 🔗	
Screen I	D		Template	Multiple Choice with Single Correct Answer
Screen C	ontent	(Text may be lim	ited.)	
Title	Ques	stion - 14	80.0	
Prompt	Sele	ct the best answer	then click Su	ıbmit.
Text	Mr.	Peterson's lense:	s are multifoo	cals. You are in the process of verifying the distance portion. What steps
	will	you perform?		

Cours e	Lensometry	Module	Lensometry	Module #	
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Topic	Ising a	Lenso	meter 3	KICO.
Screen ID	Janig a	LCIISO	Template	Multiple Choice with Single Correct Answer
Learner options			-	
			A You will	focus the eye piece so that all target lines are in focus
Place an X in the	box		B You will	rotate the power drum until the sphere lines are clearly focused, then you'll
to the left of the correct answer.			note the	reading on the power drum
correct answer.			C You will	perform the same steps as those for single vision lenses, then you will
Delete unused ch	oices			near PD with the marking device
and text.		Х		perform the same steps as those for single vision lenses then you will mark
				ince PD with the marking device
Programming Ins	struction	ns/ Svs	stem Response	Move to next frame

T	opic		Using a	Lens	omet	er 3	delle i die	
S	creen ID				To	emplate	Multiple Choice with Single Correct Answer	
S	creen Co	ntent ((Text ma	y be	limite	d.)	01,01 70	
	Title	Quest	ion - 15				LEST DETT	
	Prompt	Select	t the bes	t ansı	wer th	nen click S	ubmit.	
	Text	To ide stop.	entify th	ne dis	tance	power a	nd axis on Progressive lenses, place the	in front of the lens
L	earner o	ptions					*06	
			•		Α	Fitting ci	ross	
	lace an) the left			X	В	Distance	circle	
	orrect an				С	Optical c	center dot	
					D	Addition	engraving	
	elete un	used cl	hoices			90		
a	nd text.				age (
P	rogramn	ning In	structio	ns/ S	ystem	Response	Move to next frame	

Cours Le	ensometr	У			Module	Lensometry	Module #	
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Topic		How to	Use an A	utolensomet	er		FILE	
Screen I	:D		-	Template	Multiple	Choice with Single Correct Answe	r o	
			ay be limit	ed.)			xiO ¹	
Title	Quest	tion - 16						
Prompt	t Selec	t the bes	t answer t	then click Sub	mit.		(6)	
	Newe	er mode	ls of auto	lensometers	allow y	ou to measure the power of	9	
Learner								
			Α	progressiv	e lenses	s ansit		
Place an X in the box to the left of the			ХВ	contact ler	ises	8		
correct a		-	С	spherical l	enses	***		
			D	concave le	nses			
Delete un and text.		hoices				" Agende no sie"		
Program	ıming Ir	nstructio	ns/ Syste	m Response	Mov	e to next frame		
				-		ve to next frame		
Topic			Use an A	utolensomet	er	Jischest Maerit		
Topic Screen I	:D	How to	Use an A	utolensomet Template	er	Choice with Single Correct Answe	r	
Topic Screen I	D	How to	Use an A	utolensomet Template	er	Jischest Maerit	r	
Topic Screen I Screen C Title	Content Quest	How to (Text mation - 17	Use an A	utolensomet Template I	er Multiple	Jischest Maerit	r	
Topic Screen I Screen C Title	Content Quest	How to (Text mation - 17	Use an A	utolensomet Template	er Multiple	Jischest Maerit	r	
Topic Screen I Screen C Title	Content Quest t Selec	How to (Text mation - 17) t the bes	Use an A ay be limit	utolensomet Template I	er Multiple	Choice with Single Correct Answe		
Topic Screen I Screen C Title Prompt	Content Quest Selec Autol	How to (Text mation - 17 t the besitensome	Use an A ay be limit	utolensometorics of the set of th	er Multiple	Choice with Single Correct Answe		
Topic Screen I Screen C Title Prompt Text Learner	Content Quest t Selec Autol options	How to (Text mation - 17) It the besidensome	Use an A ay be limit at answer to ters allow	utolensometored.) then click Subvey you the abi	er Multiple	Choice with Single Correct Answe		
Topic Screen I Screen C Title Prompt Text	Content Quest t Selec Autol options X in the	How to (Text mation - 17) t the besidensome	Use an A ay be limit at answer to ters allow	utolensometored.) then click Substitute of the some o	er Multiple	Choice with Single Correct Answe		
Topic Screen I Screen C Title Prompt Text Learner of	Content Quest Selec Autol options X in the	How to (Text mation - 17) t the besidensome	Use an A ay be limit at answer to ters allow A X B	then click Sub y you the abi	er Multiple	Choice with Single Correct Answe		
Topic Screen I Screen C Title Prompt Text Learner of the let correct a	Content Quest X in the fit of the answer.	(Text mation - 17 t the best lensome	Use an A ay be limit at answer to ters allow	utolensometored.) then click Substitute of the some o	er Multiple	Choice with Single Correct Answe		
Topic Screen I Screen C Title Prompt Text Learner of the left	Content Quest t Selec Autol options X in the	(Text mation - 17 t the best lensome	Use an A ay be limit at answer to ters allow A X B	then click Sub y you the abi	er Multiple	Choice with Single Correct Answe		

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Cours	Lensometry	Module	Lensometry	Module #	
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Topic	How to	Use an Autolen									
Screen ID		Templa	Multiple Choice with Single Correct Answer								
	tent (Text ma	y be limited.)	c _O V.								
Title	Question - 18		A _S								
Prompt 3											
Text What is the 1st step you should perform when using an autolensometer?											
Learner op											
5 / Y	, .	x A Posi	ion the frames or the lens on the lens holder								
Place an X			e the lens blank/eyewear on the stage.								
to the left of the correct answer.			.91								
		D Lool	through the exepiece and center the target in the reticle.								
Delete unus and text.	sed choices		tot Oto								
			$i_{i}c_{i}$								
		ad in this adenda are	ptopose state of the state of t								
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	Cours	Lensometry	Module	Lensometry	Module #	
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7	opic		I law ta	l la s		۸ ا ما م م م م م م					
_			How to	USE	e an <i>i</i>	Autolensome					
S	creen ID					Template	Multiple Choice with Single Correct Answer				
S	Screen Content (Text may be lin			e lim	ited.)	, x ₀					
	Title	Ques	stion - 19)	98 Loc						
	Prompt	Seled	ct the be	st ar	answer then click Submit .						
	Text	Whe	n you m	neas	ure a	a contact len	s on an autolensometer,				
L	earner o	ptions	5				Die ion opposite				
t	Place an X in the box to the left of the correct answer. Delete unused choices			x B	appear o	ontact lens on the contact lens stand and wait for the measurement to n the screen contact lens stand, and adjust the lens placement as					
					needed.	Lower the lens holder, and hold the contact lens stand which the contact ready placed to allow the instrument to verify the power.					
a	and text.			С	Lower th	contact lens on the lens holder, and adjust the lens placement as needed. e lens holder, and hold the contact lens stand which the contact lens is placed to allow the instrument to verify the power.					
					D	Then rot	ermine the amount of sphere power by bringing the 3 wide lines into focus. ate the power drum and axis wheel until the 3 thin lines are in focus. The e between the 2 powers will equal the cylinder power.				

Cours e	Lensometry	Module	Lensometry	Module #
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Topic	How to Use an	Autolensometer		COURS

Topic	How to	Use a	n Aut	tolensometer				
Screen ID			Te	emplate Multiple Choice with Single Correct Answer				
Screen Content			imited	ed.)				
Title Ques	tion - 20			also and				
Prompt Select the best answer then click Submit.								
Text What is an autolensometer?								
Learner options				Of in also				
Place an X in the to the left of the correct answer.	•	X		An autolensometer will help you measure the properties of your patients' eyeglasses, and not only compare them to the written prescription, but also of for fitting measurements.	heck			
Delete unused o			В	The autolensometer will help you to measure the spherical power, cylindrical and axis, addition power, and optical center of a lens only.	power			
and text.	lioices			The autolensometer is a measuring device for automobile windshields				
			_	The sub-Person star belong the contemporaries a sufficient succession				
	. ne	ad in this	and the second	The autolensometer helps the optometrist perform a refraction				
Materi	alscontain				13			

Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Sent: Thursday, January 18, 2024 6:23 PM

To: Shoven Paige Subject: **ABO Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS

217 N. Upper Street, Suite 201

Lexington, KY 40507

703-719-5800 • 800-296

Dear Judith,

This letter will confirm that the American Board of Opticianry Education Committee approved the following online course:

Course: Maintaining a Healthy Team

Designation: Non-Ophthalmic

Course Number: SWEOA013

Expires: January 18, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

, scitica.com. You are necessing this amail because you submitted a course for approved global bands.

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Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Sent: Thursday, January 18, 2024 6:24 PM

To: Shoven Paige

Subject: **NCLE Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

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AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS

217 N. Upper Street, Suite 201

Lexington, KY 40507

703-719-5800 • 800-296

Dear Judith,

This letter will confirm that the National Contact Lens Examiners Education Committee approved the following online course:

Course: Maintaining a Healthy Team

Designation: Non-Ophthalmic

Course Number: CWEOA001

Expires: January 18, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

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CEC: MAINTAINING A HEALTHY TEAM

Course Description:

MAINTAINING A HEALTHY TEAM covers the following three areas:

- the practice. Through examples of ethical and non-ethical behavior in the lesson, the learner will be able to apply these concepts to the practice. Learn about and understand how to implement a Code of Conduct for the practice and why it is important to have one.

 Handling Tough Conversations: Describes key steps for having a tough conversation colleague or patient. The learner will learn how to use these transportant to the conversation of the practice and why it is important to have one.

 Conflict Resolution 1. Ethics and Employee Conduct: Describes the concept of ethics and reviews ethical practices in
- 2. Handling Tough Conversations: Describes key steps for having a tough conversation with a
- 3. Conflict Resolution: Provides information on how to identify conflict, how to approach the staff member or patient, and key steps for resolving conflict in the practice.

Course Outline w/timing: 55 minutes

- 1) Ethics and Employee Conduct (20 min)
 - a) Introduction
 - b) Course Objectives
 - i) Explain what ethics are, and how to create and maintain an ethical environment
 - Identify whether or not an action is ethical
 - Explain the four steps of decision making, and the five factors for making an ethical decision
 - iv) List individual personal values that impact ethical decision making
 - v) List questions related to ethics, hiring and termination policies, laws, and standards
 - c) Ethics and Your Practice
 - cs and Your Practice
 i) Your Practice's reputation is one of its most important assets
 - (1) Good business ethics contribute to your reputation and increase your business opportunities.
 - (2) Unethical behavior, on the other hand, can result in ill will and negative publicity that hurts your practice's reputation and ability to attract business.
 - ii) What are Ethics?
 - (1) ethics are defined as the distinction of right from wrong, good from
 - bad, and fair from unfair.
 iii) Ethics and Employee Conduct
 - (1) Scénario 1
 - (2) Scénario 2
 - The Decision Making Process
 - i) Essential Elements of an Ethical Decision
 - (1) Examine the issue
 - (2) Weigh the Alternatives
 - (3) Make a Decision
 - (4) Evaluate the Consequences
 - Personal Values and Decision Making
 - (1) List of Individual personal values
 - The practice of ethical decision making lies with the individual
 - (1) Ethical decision-making is influenced by the personal ethical values held by the individual.
 - (2) It is the responsibility of the staff member to ensure they perform ethically at all times.
 - The Framework for an Ethical Environment
 - i) Code of Conduct

- (1) Fundamental part of Developing and Maintaining an Ethical Environment
- (2) What makes a great Code of Conduct?
 - (a) Should be written for the practice staff
 - (b) Easy to understand without any technical or legal jargon
 - (c) Compréhensive.
 - (d) Supported by your doctors and/or the practice owners.
 - (e) Accessible.
 - (f) Visually appealing
- (3) What's in it for You and Your Practice?
 - (a) Reinforce staff loyalty and retention
 - (b) Prevent legal and regulatory violations
 - (c) Encourage greater patient loyalty and retention
- or official Board position (d) Build stronger relationships with vendors and other business partners
- (4) Creating, Communicating, and Reinforcing Your Code of Conduct
 - (a) A practice code of conduct is a living document that requires development, publication, education and reinforcement, as well as revisions when necessary.
 - (i) Must communicate your doctor's or practice leadership's commitment to its purpose and contents in a compelling
 - (ii) Should be communicated in a format that fits the practice staff's characteristics and needs.
 - (iii) Should be inspirational
 - (iv) Is an essential communication regarding compliance with laws and regulations.
 - (v) Should help practice staff make the appropriate decision, by providing guidance, through frequently asked questions, common issues, solutions, and suggestions
 - (vi) Must be reinforced on a regular basis by the practice's Cleadership
- (5) Key Takeaways:
 - (a) Ethics are defined as the distinction of right from wrong, good from bad, and fair from unfair
 - (b) Effective decisions are decisions that you are most satisfied with, given the prevailing circumstances
 - (c) There are four steps in the effective decision making process: examine the issue, weigh the alternatives, make a decision, and evaluate the consequences
 - (d) Ethical decision-making is influenced by personal ethical values held by an individual
 - (e) A code of conduct is a fundamental part of developing and maintaining an ethical environment within your practice
 - (f) Practice leadership should make every effort to ensure staff follow the code of ethics by educating, communicating and using refresher courses and presentations
 - (g) There are many benefits of implementing a code of ethics in your practice including staff retention and engagement, reduced risk of violation, enhanced relationships with vendors and suppliers, and greater engagement of patients

Materials contained in this agenda are proposed t

- 2) Handling Tough Conversations (15 min)
 - a) Course Objectives
 - i) Understand why people avoid having tough conversations
 - Explain why it's necessary to have tough conversations
 - iii) Identify the key steps to consider during a tough conversation
 - Recognize the additional considerations to apply when navigating a tough conversation
 - List some examples of tough conversations V)
 - b) Tough Conversations
 - i) Short term it looks easier to avoid tough conversations
 - ii) Most people tend to avoid problems because:
- Offical Board position (1) They believe that ignoring the problem will eventually make it go away
 - (2) Facing problems head-on requires a lot of courage and can appear intimidating at first
 - (3) They do not want to admit that a problem exists
 - (4) Past experiences dealing with problems did not turn out well
 - (5) They do not like conflict
 - iii) Remember when facing a tough conversation:
 - (1) Address the problem as soon as it become evident
 - (2) Emphasize with the other party
 - (3) Write down the main points and ask the other party for their opinions
 - (4) Listen actively
 - iv) Having a tough conversation is something that will eventually happen
 - (1) Examples of tough conversations in the practice
 - c) Key Steps to Consider During a Tough Conversation
 - i) Most issues can be resolved with honest conversation
 - (1) Tough Conversation scenario
 - (a) 4-step process to handle this situation
 - (i) Preface the conversation with a commitment to the relationship
 - (ii) Fill emotional tanks
 - (iii) Replace "you" with "we" as much as possible and do not verbally attack the other person
 - (iv) Sell the benefit
 - Summary
 - d) Key Takeaways
 - i) It is important to have tough conversations and communicate effectively when problems arise
 - There are four key steps to follow during a tough conversation
 - iii) There are some additional considerations you need to remember while having tough conversations
 - Following the four-step process makes your listener receptive to your message and turns a tough discussion into a productive one

Materials contained in this adendav)

- 3) Conflict Resolution (20 min)
 - a) Course Objectives
 - i) Identify the different types of conflict
 - Understand the approaches you can take to resolve the conflict
 - Identify key behaviors to resolve conflicts
 - iv) Explain the three primary steps in conflict resolution
 - b) The 5 Types of Conflict
 - i) Data Conflict
 - ii) Task Conflict
 - iii) Relationship Conflict
 - iv) Value Conflict
 - v) Structural Conflict
 - c) Internal and external solutions for the types of conflict
 - i) Internal solutions
- regulation of official Board position ico (1) Task, relationship and value conflicts relate to internal sources of conflict and may be much more difficult to resolve.
 - External solutions
 - (1) Data and structural conflicts have external source of conflict: they are typically easier to resolve by changing something in the external environment.
 - d) How to Approach a Conflictual Situation
 - i) A renowned conflict resolution model proposed by Kenneth Thomas and Ralph Kilmann suggests that there are two dimensions when choosing a course of action in a conflict situation; Assertiveness and Cooperativeness
 - ii) Within this framework, you may use one of the following 5 approaches in dealing with conflict:
 - (1) Collaborating
 - (a) Types of collaborating
 - (i) Working together to identify the source of conflict and propose solutions toward the goal
 - Learning from each other's insight
 - Listening and communicating to promote understanding of needs, goals, and values
 - Results
 - Builds relationships and improves the potential for future problem solving
 - (ii) Promotes creative solutions
 - (c) Appropriate when;
 - (i) There is a common desire to work through hard feelings
 - There are diverse interests and issues at play, yet a common willingness to reach the goal
 - New insights can be beneficial in achieving creative solutions
 - (iv) The issue is too important to make any compromises
 - (2) Competing
 - (a) Types of competing:
 - Use of authority, the position ofmajority, or power
 - Putting pressure on the other through threats, force, or
 - (b) Results:
 - (i) Lower levels of communication and trust
 - (ii) Risk of escalation
 - (iii) The other party may withdraw at some point
 - (iv) Reduces the quality and durability of the solution
 - (v) Increased likelihood of future problems

Materials contained in this agenda are proposed

- (c) Appropriate when:
 - (i) Working with short time frames and guick action is Offical Board position essential
 - More trivial issues are at hand
 - (iii) Leadership is required for tough decisions
- (3) Avoiding
 - (a) Types of avoidance
 - (i) Mental or physical withdrawals
 - (ii) Denial that the problem exists
 - (iii) Changing the subject
 - (iv) Blaming or minimizing the other party
 - (v) Postponing to a future and more appropriate time
 - (vi) Use of emotions (tears, anger, etc)
 - (b) Results:
 - (i) Often the dispute is not resolved
 - (ii) The dispute keeps on building up and eventually explodes into a much worse situation
 - (iii) Stress spreads to others (staff or family members)
 - (c) Appropriate when:
 - (i) Potential damage outweighs potential benefits
 - (ii) The issue at hand is really not important, or another issue is more pressing
 - (iii) Timing for dealing with the conflict is inappropriate
- (4) Accommodating
 - (a) Types of accommodating
 - (i) Playing down the conflict to maintain harmony
 - (ii) Yielding to the other point of view
 - (iii) Self-sacrifice
 - (b) Results:
 - Strengthens the relationship, which will be more effective in future problem solving
 - (ii) Increases the chances that the other party may be more accommodating in the future
 - Does not necessarily improve communication and transparency short term
 - Appropriate when:
 - (i) Preserving harmony between parties is more important than the outcome
 - You are flexible on the outcome, or when the issue is more important to the other party
 - It's necessary to build up good faith for future problem solving
 - (iv) You are wrong or in a situation where the other party could damage your position
- (5) Compromising
 - (a) Types of compromising
 - (i) Finding middle around
 - (ii) Split the difference
 - (iii) Exchanging concessions
 - (b) Results:
 - (i) Both parties feel they have reached their goals while maintaining the relationship
 - Both parties may feel they lost the battle and feel the need to get even nexttime
 - No relationship is established although it should also not cause relationship to deteriorate

Materials contained in this agenda are proposed to

- (c) Appropriate when:
 - (i) Collaboration or competition fails
 - Time pressures require quick solutions
 - and as regulation or offical Board position of offical Board position Short-term solutions are needed until more information can beobtained
- e) Resolving Conflicts Successfully
 - i) Key Recommendations:
 - (1) Set a safe environment
 - (a) Trust of character
 - (b) Trust of disclosures
 - (c) Capability trust
 - (2) Identify emotions correctly
 - (a) Examples
 - (i) Anger
 - (ii) Confusion
 - (iii) Frustration
 - (3) Listen actively and think about your response
 - (a) Slow down your response
 - (b) Do not respond immediately
 - (c) Focus on the speed and volume of your speech
 - (d) Try to postpone the conversation if you find you cannot respond in a positive manner
 - (4) Remain Positive
 - (a) Negative and Positive responses
 - (5) Avoid Negative Language
 - (a) Key phrases to avoid
 - (6) Avoid Confrontational Behavior
 - (7) Know when to be assertive
 - (8) Agree on the best solution
- Patients and Conflict Resolution
 - i) Patient satisfaction should always be your top priority
 - Three steps in resolving patient conflicts
 - (1) Assess the situation
 - (2) Focus-S
 - (3) Be deliberate
 - iii) Apply these steps to real life conflicts
 - (1) Examples
- Key Takeaways
 - i) In your day-to-day activities, conflicts with staff members and patients can occur
 - There are 5 types of conflicts: data, task, relationship, value and structural. Depending on the type of conflict you are facing, you will need to determine the appropriate approach to solve it
 - To solve a conflict, you may collaborate or compete with the other party, avoid the conflict, accommodate or compromise
 - iv) Patient conflicts usually stem from hurt emotions and it's your duty to remove the hurt and ensure patient satisfaction
 - To resolve patient conflicts, you need to follow three primary steps and use key tips, such as identifying the emotion, preparing your responses, being positive, avoiding negative language, avoiding confrontation, and being assertive when required

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Test Questions

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Text Which o	of the following	g is NOT an appropria	te action to take during a patient conflict?
Learner options			
		A Consider yo	our response carefully
Place an X in the	box	B Empathize	with their emotions
to the left of the		C Act upon th	eir request immediately
correct answer(s	\sim	Tell them it	is the practice's policy that prevents you from do anything about the situation
Delete unused ch	noices	inis 200	
and text.	,,	fl.,	
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Conflict Resolution Topic Screen ID **Template** Multiple Choice with Single Correct Answer **Screen Content** Title Question - 3 **Prompt** Select the best answer(s) then click **Submit**. Which of the following is one primary step required to resolve patient conflicts? Text **Learner options** Identify the patient A Place an X in the box В Discuss the situation with the patient to the left of the X \mathbf{C} Focus on patient's need Move to next frame of the state correct answer(s). None of the above D Delete unused choices and text.

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Prompt	Prompt Select the best answer then click Submit.									
Text	What is	the sole	object	tive fo	for creating a quality Code of Conduct for the practice?					
Learner o	ptions									
				A Making sure the staff members know how to act appropriately with the patients						
		n the box	X	В	Improving the practice's success					
to the left				C	Use it for the employees performance reviews					
correct ar	iswer.			D	Making a list of "do's" and "don'ts" for the staff members to follow					
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Learner	Learner options								
				A	Take all elements into account: the practice, the staff, patients and the environment				
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to the le				C	Examine y	our motives for making the decision			
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	keep fro	om procr	astinati	ion?		ics the second s		
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		_	A Delegate your work to others					
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Learner o	ptions							
		_		Α		cation, training, practice		
Place an 2 to the left		box	X	В		ent, publication, education, reinforcement		
correct ar				C		, dedication, reinforcement		
correct ar				D None of the above				
Delete un	used ch	noices	con-					
and text.						No.		
D	• -		/ 6		. B	No. 1 Acres 15 and 15 a		
Programn	ming In	structio	ns/ Sy	/sten	n Response	Move to next frame		
Topic	I	Handling	Tough	Conv	ersations			
Screen ID		rananng	Tough		emplate	Multiple Choice with Single Correct Answer		
Screen Co	ontent (Text ma	av be l	imite	ed.)			
Title	Questic				 /	cus volet		
Prompt	Select t	the best a	inswer	then c	elick Submit	A STATE OF THE STA		
Text	Reason	ıs most pe	eople to	end to	avoid probl	ems: es		
Learner o		г	F		I			
	Place an X in the box to the left of the correct answer.			Α	They belie	ve that ignoring the problem will eventually make it go away		
				В		blems head-on requires a lot of courage and can appear intimidating at first		
				С	They do no	ot like conflict		
correct al			X	D	All of the	above		
Delete un	used ch	noices			700.			
and text.				.01	70.			
				200				
Drograms	mina In	ctructio	nc/Sì	Veton	Resnonse	Move to next frame		

Programming Instructions/ System Response

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			g Tough Conversations			<u>, </u>
Screen ID				T	emplate	Multiple Choice with Single Correct Answer
Screen Co	ntent	(Text ma	ay be I	limite	ed.)	
Title	Questi	on 16				KEICO
Prompt	Prompt Select the best answer then cli					o o
Text	What a	are the 3 is	mporta	nt ste	ps to correct	ly resolve a conflict?
Learner o	ptions					
				Α	Focus, Be	deliberate, and Provide a solution
Place an >			X	В	Focus, Be	deliberate, and Assess the solution
to the left				С	Apologize,	Be deliberate, and Provide a solution
correct ar	iswer.			D	Apologize,	Be deliberate, and Assess the solution
Delete un	used c	hoices				GOTT
and text.						No.
						O
Programn	ning In	structio	ns/ Sy	sten	n Response	Move to next frame

Topic Ha	andling Tough C	Conversations	" bo " ug				
Screen ID		Template	Multiple Choice with Single Correct Answer				
Screen Content (T	ext may be lin	nited.)	Sell and				
Title Question	Question 17						
Prompt Select the best answer then click Submit.							
Text Which o	f the following is	s a key step to co	onsider during a tough conversation?				
Learner options			1/0/				
		A Preface the	conversation with a commitment to the relationships				
Place an X in the L	oox I	B Fill emotion	nal tanks				
to the left of the correct answer.		C Replace "y	ou" with "we" as much as possible and don't verbally attack the person				
correct answer.	I	D Sell the ber	nefit				
Delete unused cho	ices X I	E All the abo	ve				
and text.		adent					
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Topic	Нат	ndling '	Tough	Con	versations				
Screen ID		idillig	Tough		emplate	Multiple Choice with Single Correct Answer			
Screen Co	ntent (Te	xt ma	y be l	limite	ed.)				
Title	Question		-		•	ELCO			
Prompt Select the best answer then click Submit.									
Text	What is a	reason	peopl	e typi	cally avoid to	tough conversations?			
Learner o	ptions								
				Α	They don't care if the situation is resolved or not				
Place an)		ox	X	В	They don't	t like conflict			
to the left				С	They believe they are right so why deal with it?				
correct an	iswer.			D	They are n	not good at talking to people			
Delete un	used choi	ces				COLL.			
and text.					•	to be			
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Topic	Handling	Tough Conversations
Screen ID		Template Multiple Choice with Single Correct Answer
Screen Co	ntent (Text m	ay be limited.)
Title	Question 19	is constitution of the con
Prompt	Select the best of	answer then click Submit .
Text	What part of the actions?	e four step process for handling tough conversations is showing the person how they will benefit from changing their
to the left correct an Delete und and text.	(in the box of the swer. used choices	A Fill emotional tanks B Replace "you" with "we" as much as possible and don't verbally attack the other person X C Self the Benefit D Preface the conversation with a commitment to the relationship
Programm	ning Instruction	ons/ System Response Move to next frame
	Materials contain	

Topic		g Tough C	Conversations	
Screen ID			Template	True or False
	ntent (Text m	nay be lin	nited.)	
Title	Question 20			or o
Prompt	Select the best	answer th	en click Submit .	
Text	Having a diffic	ult conve	rsation with a sta	aff member or patient is something that likely will not happen
earner o	ptions			(Ø)
Place an X in the box to the left of the correct answer.		X	True False	- Situel as
rrect ar	nswer.			COL.
4 4	used choices			, a solito be
rogramn	ning Instruction	ons/ Sys	tem Response	e Move to next frame
	•4	ed in this	agenda are propo	e Move to next frame Drath Political Sign and Pratter Dratter

Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Sent: Tuesday, February 13, 2024 6:03 PM

To: Shoven Paige Subject: **ABO Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS

217 N. Upper Street, Suite 201

Lexington, KY 40507

703-719-5800 • 800-296.

Dear Walter,

This letter will confirm that the American Board of Opticianry Education Committee approved the following online course:

Course: Ocular Anatomy

Designation: Ophthalmic Level I

Course Number: STWEOA124-1

Expires: February 9, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

, scitica.com. You are necessing this amail because you submitted a course for approved global bands.

The standard of the course for approved global bands and the course global bands and the course gl

Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Tuesday, February 13, 2024 6:18 PM Sent:

To: Shoven Paige

Subject: **NCLE Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS

217 N. Upper Street, Suite 201

Lexington, KY 40507

703-719-5800 • 800-296.

Dear Walter,

This letter will confirm that the National Contact Lens Examiners Education Committee approved the following online course:

Course: Ocular Anatomy

Designation: Ophthalmic Level I

Course Number: CTWEOA005-1

Expires: February 9, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

, scitica.com. You are necessing this amail because you submitted a course for approved global bands.

The standard of the course for approved global bands and the course global bands and the course gl

To Whom It May Concern,

of of the position of the posi I certify that I have completed the following course in no less than the number of credit hours (1) requested for approval.

CE03 – OCULAR ANATOMY

Sincerely,

Brooks K Carrasco

Brooke Carrasco, ABOC, NCLE

To Whom It May Concern,

I certify that I have completed the following course in no less than the number of credit hours (1) requested for approval.

OCULAR ANATOMY

Sincerely,

Paige Shoven, ABOC

CEC: ADVANCED OCULAR ANATOMY

ADVANCED OCULAR ANATOMY covers the following areas:

- 1. Discusses the different parts of the eye and how they contribute to a patient's vision. It also
- riovides detailed information about the anatomy of the eye and how this understanding should be appropriately used when working with patients. It also gives an overview of various ocular diseases.

 outline/timing: 2. Provides detailed information about the anatomy of the eye and how this understanding should

Course outline/timing:

- 1)
- 2)
- 3)

 - - iii) Vitreous humor
- Refraction and Accommodation 4)
 - a) Cornea
 - b) Aqueous humor
 - c) Crystalline lens
 - d) Vitreous humor
 - e) Ciliary muscles
 - f) Zonular fibers
- Anatomy of the Retina 5)
 - a) The Optic Disk
 - b) Fovea
 - There are two types of photoreceptors in the human retina:
 - Rods What rods are and chart
 - (ii) Cones What cones are and chart
 - d) Ganglion Cells These cells extend to form an optic nerve that conveys information to the brain and take the electrical information from the bipolar cells and process it to determine shapes, contrast and color.
 - Picture of a Ganglion Cell
 - Bipolar Cells -These cells take the electrical information from the photoreceptor cells and pass it along to other retinal cells.
 - g) Picture of Bipolar Cells
 - Horizontal Cells These cells are connected to the photoreceptors that surround the bipolar connected photoreceptor cells and help integrate and regulate the input from multiple photoreceptor cells, increasing your visual acuity.
 - Picture of Horizontal Cells
 - Photoreceptors This is where the rods and cones are located that convert light into electrical signals. Rods help you with night and peripheral vision. Cones are more concentrated in the macula (the central part of the retina) and proved central and color

- vision. Retinitis pigmentosa can cause vision loss called retinitis pigmentosa, while AMD is the loss of central vision.
- k) Picture of Photoreceptors
- Board Position l) Retinal Pigment Epithelium (RPE) - This is a single layer of cells that provide essential nutrition and waste removal for the photoreceptor cells. Accumulation of waste can lead to AMD and Stargardt disease.
- m) Picture of Retinal Pigment Epithelium
- 6) Extraocular Muscles and Eye Movements

What the extraocular muscles are and what they do

- a) Superior Rectus The superior rectus inserts at the anterior (front) portion of the eye; and its origin is behind the eye on the common ring tendon. Its primary function is to elevate the eye, and it has a mild secondary function of adduction and intorsion.
- b) Picture of the Superior Rectus muscle
- c) Superior Oblique The superior oblique is unique. It inserts on the superior lateral (earside), and posterior (back) of the eye. The anatomical origin is behind the eye on the lesser wing of the sphenoid bone, but the superior oblique muscle acts a pully, and loops back through a connective tissue sling called the trochlea. Even though it is positioned above the eye, its unique use of the trochlea gives it a primary function is to intort the eve, and secondary functions of depression and abduction?
- d) Picture of the Superior Oblique muscle
- e) Inferior Rectus -The inferior rectus inserts at the anterior (front) portion of the eye, and its origin is behind the eye on the common ring tendon. Its primary function is to depress the eye, and it has a mild secondary function of adduction and extorsion.
- f) Picture of the Inferior Rectus muscle
- f) Picture of the Inferior Rectus muscle
 g) Inferior Oblique The inferior oblique is also. It inserts on the inferior, posterior, lateral portion of the eye. Its origin is on the medial (middle) maxillary bone. Its primary function is extorsion, and its secondary functions are elevation and abduction.
- h) Picture of the Inferior Oblique muscle
- Lateral Rectus The lateral rectus inserts at the anterior (front) portion of the eye, and its origin is behind the eye on the greater wing of the sphenoid bone as well as the common ring tendon. Its primary function is to abduct the eye, and it has no secondary function.
- Picture of the Lateral Rectus muscle
- k) Medial Rectus The medial rectus inserts at the anterior (front) portion of the eye, and its origin is behind the eye on the common ring tendon. Its primary function is to adduct the eye, and it has no secondary function.
- I) Picture of the Medial Rectus muscle
- 7) How are the extraocular muscles controlled?
 - a) Three cranial nerves are responsible for controlling the extraocular muscles
 - i) Third cranial nerve (oculomotor nerve)
 - ii) Fourth cranial nerve (trochlear nerve)
 - iii) Sixth cranial nerve (abducers nerve)
- 8) Understanding Eye Movement
 - a) There are two main kinds of movement:
 - i) Conjugate movement (eyes move in the same direction)
 - ii) Disjunctive (eyes move in opposite directions)
- The Movement of the Eve May Be Affected by Damage to the Cranial Nerves
 - a) Examples
 - i) Damage may result in lack of movement synchronization between the two eyes, and lead to double vision (diplopia).
 - ii) Damage to the oculomotor nerve (III) can lead to the inability to coordinate the movements of both eyes (strabismus), also eyelid drooping (ptosis) and pupil dilation (mydriasis).
 - iii) Lesions may lead to paralysis of the levator palpebrae muscle, removing the ability to open the eye.
 - iv) Damage to the trochlear nerve (IV) can also cause double vision with the eye adducted and elevated. The result will be an eye which can not move downwards

- properly (especially downwards when in an inward position). This is due to impairment in the superior oblique muscle.
- v) Damage to the abducens nerve (VI) can also result in double vision. This is due to impairment in the lateral rectus muscle, supplied by the abducens nerve.
- vi) Amblyopia (also called lazy eye) is a type of poor vision that happens in just one eye. It develops when there is a breakdown in how the brain and the eye work together, and the brain cannot recognize the sight from one eye.
- vii) Ophthalmoparesis is weakness or paralysis of one or more extraocular muscles

XI. Key Takeaways: a. There are three layers in the eye:

- The outer layer of the eyeball is a tough, white, opaque membrane called the sclera. The slight bulge in the sclera at the front of the eye is a clear, thin domeshaped tissue called the cornea.
- The middle layer is the choroid. The front of the choroid is the irise the colored ii. part of the eye. In the center of the iris is a circular opening called the pupil.
- iii. The inner layer is the retina. The retina is a thin nerve membrane that detects light entering the eye. Nerve cells in the retina send signals of what the eye sees along the optic nerve to the brain.
- There are three chambers in the eve:
 - The anterior chamber is the front part of the eye between the cornea and the iris. i.
 - ii. The posterior chamber is between the iris and dens.
 - iii. The vitreous chamber is between the lens and the back of the eye
- c. The main refractive element of the eye is the cornea The crystalline lens is responsible for changing the eye's focal point.
 d. Accommodation is the ability of the eye to adapt itself to focus from distant to near
- objects.
- e. The retina consists of 10 distinct layers of nerve cells, nerve fibers, light receptor cells, and supporting tissue.
- The macula, near the center of the retina at the back of the eyeball, provides the sharp, detailed, central vision a person uses for focusing on what is directly in the line of sight. The rest of the retina provides side (peripheral) vision, which lets a person see shapes but not fine details.
- g. There are two pairs of muscles that move the eye from side to side: one pair that moves the eye up and down, and one pair that rotates the eye.
- h. Three cranial nerves are responsible for controlling the eye muscles. The movement of the eye may be affected by damage to the cranial nerves.

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Text Th	There are (6) extraocular muscles and (1) intraocular muscle. The intraocular muscle is called the									
	?									
Learner options										
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Place an X in to the left of		E	3 Orbicular	Orbicularis Muscle						
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Text	Which	th part of the eye becomes larger and less flexible with advancing years?							
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_	O,									
	Someone with myopia is likely to have trouble seeingobjects in focus.									
Learner	options			A A combin	ination of distant and near					
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Text	The 6 extra	ocular	r musc	les responsible for stabilization of the eye are:								
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to the lef correct a	nswer(s).		B Lateral nasal, Medial temporal, Superior rectus, Inferior rectus, Superior oblique, Inferior oblique									
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Text	Sherr	ill has b	oeen w	vearir	ng her coi	ntact lenses for years. Recently, her eyes started tearing and turning red						
	when	ever sh	e wea	rs th	em. Wha	at could this potentially be a symptom of?						
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Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Sent: Tuesday, February 13, 2024 6:05 PM

To: Shoven Paige Subject: **ABO Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS

217 N. Upper Street, Suite 201

Lexington, KY 40507

703-719-5800 • 800-296

Dear Judith,

This letter will confirm that the American Board of Opticianry Education Committee approved the following online course:

Course: Optimizing Managed Vision Care

Designation: Non-Ophthalmic

Course Number: SWEOA019

Expires: February 9, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

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Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Tuesday, February 13, 2024 6:17 PM Sent:

To: Shoven Paige

Subject: **NCLE Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS

217 N. Upper Street, Suite 201

Lexington, KY 40507

703-719-5800 • 800-296.

Dear Judith,

This letter will confirm that the National Contact Lens Examiners Education Committee approved the following online course:

Course: Optimizing Managed Vision Care

Designation: Non-Ophthalmic

Course Number: CWEOA005

Expires: February 9, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

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CEC: OPTIMIZING MANAGED VISION CARE

or revenue for most practices. Discover why it is important for staff to know which insurance plans are accepted and the fundamental structure of each plan. Understand why it is important for the claims to be processed efficiently and properly Optimizing Managed Vision Care: Discover how managed vision care works with the and the patients. Know and understand how to best offer an patients using their insurance

Course Outline w/timing: 50 minutes

- 1) Managing Insurance During the Patients Visit
 - i) Introduction
 - (1) Insurance is a major source of revenue for most practices
 - (2) It is important to know and understand the insurance plans your practice
 - (3) Handling insurance claims promptly and efficiently will maximize profits for the practice
 - ii) Course Objectives
 - (1) Understand the role of the front desk staff in collecting patient insurance information.
 - (2) Prepare staff members with the patient insurance information for the next dav's patients.
 - (3) Understand the importance of maximizing patient's insurance benefits
 - (4) Ensure confidentiality in managing insurance information within the practice
 - (5) Ensure that insurance co-pays and patient out of pocket amounts are collected <
 - iii) Verifying Patient Eligibility
 - (1) Ask the patient if they have insurance
 - (2) Ask for the name of the insurance and/or vision plan
 - (3) Ask the patient for the respective member ID and/or Social Security.
 - iv) Obtaining an Insurance Authorization
 - Obtain an pre-authorization at least 24 hours, or one business day, prior to the appointment
 - (2) Call the insurance company or access their website to verify eligibility by using the member ID or the patient's Social Security number.
 - (3) Print the authorization and coverage level details and place the information in the patient's file.
 - (4) Confirm the information with the patient prior to their appointment.
 - v) Communicating Patient Insurance Information to Staff
 - (1) It is important the patient record has the authorization noted in it
 - (2) This will help the pre-exam tech and the optician familiarize themselves with the patient's benefits prior to the appointment.
 - (3) Previewing the authorization allows the staff to highlight fully covered benefits and second pair coverage.
 - (a) Expected co-payments for services and/or materials
 - (b) Medical testing (exam, retinal imaging, etc.)
 - (c) Plan's material coverage options such as:
 - (d) Materials(Polycarbonate, high index...)

- (e) Lens design (Single Vision, progressive addition lenses, bifocal, trifocal)
- (f) Anti-reflective
- (g) Tint/Polarization
- (h) Photochromic
- (i) Scratch resistant coating
- (j) UV
- (k) Frame allowance
- (I) Contact lenses
- vi) Your role as an Optician is to maximize patient benefits
 - (1) Utilizing fully covered benefits
 - (a) Increases patient satisfaction
 - (b) Increases practice reimbursement amount from the plan
 - (2) Verifying Insurance coverage and issues
 - (a) Unable to verify patient eligibility issue
 - (b) Patient has already used their benefits for the year
- vii) Setting the Right Tone With Patients
 - (1) Talking with a Patient about insurance can be a tricky conversation and costly to the practice
 - (2) You and your staff need to make sure you have the authorization of insurance coverage prior to the patient's arrival for their appointment.
 - (3) When explaining benefits to the patient refrain from using phrases which could lead the patient to think their eyewear will be free.
 - (4) The best time to talk with a patient about eyewear coverage by their insurance is after the exam
 - (5) "Avoid Saying" and "Preferred Saying" graph
- viii) Insurance at Checkout 🦠
 - (1) Partner with the front desk staff to better serve your patients during checkout
 - (a) After the patient has completed their eye exam, you will assist them with their eyewear purchase and explain in detail their vision benefits.
 - (b) After you have assisted the patient, one of two things will happen. Depending upon the policy of the practice, either you:
 - (i) will order the glasses, collect the fees, and thank the patient, or
 - (ii) will submit the order and escort the patient to the front desk for check-out
 - 2) If you escort the patient to the front desk for check-out, the front desk associate will collect the fees, schedule any future appointments, and close with the patient.
 - (3) Update the health record for the patient
 - (4) File the insurance electronically
- b) Key Takeaways:
 - It is essential to the whole process that the insurance benefits are verified prior to the patient's visit. The front desk professionals may take this responsibility
 - ii) The entire staff needs to understand how to communicate patient's insurance information in a confidential manner
 - iii) You should maximize patient's insurance benefits
 - iv) You should discuss confidently insurance allowances with patients
 - v) You may need to collect co-pays and patient out of pocket amounts

Optimizing Managed Vision Care

a) Introduction

- b) Course Objective
 - i) List the key elements of a managed vision care plan
 - Describe the aspects of different provider networks
 - Recognize and describe different plan documents
 - Describe how you can contribute to your practice's profitability by optimizing managed vision care.
- Anatomy of a Managed Vision Care Plan
 - (1) All managed Vision Care Plan are built upon the following pillars:
 - (a) Provider Network
 - (b) Lab Structure
 - (c) Plan Documents
 - (2) The Provider Network
 - (a) In-Network vs Out-of Network
 - (b) Out-of-Network
 - (3) The Lab Structure
- The following pillars:

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 Network vs Out-of Network

 (i) The plan determines the qualification criterial of the contracted with the plan of ture

 are different types of lab recolar may require

 Open Lab

 Define (a) There are different types of lab requirements that a managed care plan may require

 - (ii) Defined Lab Network
 - Contracted Lab
 - Restricted Lab
 - (4) The Plan Documents
 - (a) Benefit Summary
 - (b) Provider Reimbursement Summary
 - (5) Look at Managed Care as an Opportunity
 - (a) The best way to view your patients who have managed vision care as opportunities or as GEMS:
 - (i) G Most patients with managed vision care are GAINFULLY employed
 - (ii) E Managed care encourages patients to schedule regular eye EXAMS
 - (iii) M Many patients with managed care MAKE decisions based on need and coverage
 - S Patients with managed care want want value or SAVINGS from their coverage
 - (b) Example of poor explanation of managed care benefits
 - (c) Example of an excellent explanation of managed care benefits
 - Managed Vision Care and ECP Profitability
 - (a) It is important to know and understand the managed care plans used by your patients and how they contribute to the profitability of the practice
 - (i) Engage with your staff and work together to put an action plan into place for your practice
 - 1. Identity the major plans used by your patient
 - 2. Understand how each plan reimburses
 - 3. Identify alignment of plan benefits and patient
 - Identify how to maintain a high capture rate of managed care patients
 - Develop a Plan
 - Execute your Plan
 - 1. Start with the Front Desk
 - 2. Follow up with the optical
 - Key Takeaways

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Topic Managing Insurance During the Patients Visit

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Managing Insurance During the Patients Visit Topic

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Topic | Managing Insurance During the Patients Visit | Screen ID | Template | True or False - Select one | Screen Content | Question - 9 |

| Select the best answer then click Submit. | Only the Optician needs to understand how to communicate patient's insurance information in a confidential manner

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Topic Managing Insurance During the Patients Visit

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	- 			D	patient satisfaction	
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Topic Op	otimi	zin	g M		ed Vision Care	
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Topic	Optimizing Managed Vision Care								
Screen ID	Template	Multiple Choice with Single Correct Answer							
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Materials									

Question -11 Select the best answer then click **Submit**. All Managed Vision Care plans are built upon the following three pillars: **Learner options** Provider network, lab structure, increasing revenue Place an X in the box Lab structure, customer satisfaction, preferred practice В to the left of the X Provider network, lab structure, plan documents correct answer(s). Preferred practices open labs, plan documents Delete unused choices and text. Learner Action **Learner Feedback Programming Instructions/ System Response** Click NEXT and branch to next Select the relevant CA Correct. answers then click page Click NEXT to continue. Submit. Show ticks and crosses next to WA Incorrect.

Topic	Optimizing Managed Vision Care

Click NEXT to continue.

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Materials contained in "

Topic Optimizing Managed Vision Care Screen ID Template Multiple Choice with Single Correct Answer **Screen Content** Ouestion - 13 Select the best answer then click **Submit**. and the The summary are two important managed vision care plan documents you need to know about. **Learner options** benefit summary, provider reimbursement X Place an X in the box provider summary, benefit reimbursement В to the left of the patient health, patient benefit correct answer(s). Doctor summary, provider network Delete unused choices and text.

al Board position
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	<u>,0</u>
Topic	Optimizing Managed Vision Care
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Screen Conte	nt Sold All Control of the Control o
Question –	Dre significant Adenda
Select the b	est answer then click Submit .
 	pest answer then click Submit .
Managed Vi	sion Care should be looked at as an, not an
t	_ in the practice.
NO	arials contained in this agence

Learner options

Place an X in the box to the left of the correct answer(s).

Delete unused choices and text.

			0,1
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X	В	Opportunity, obstacle	HOI.
	С	Asset, obstacle	
			× 100
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Learner Action	Learner	r Feedback	e contr	Programming Instructions/ System Response
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Topic Optimizing Managed Vision Care

Screen ID Template Multiple Choice with Single Correct Answer

Screen Content

Question – 15

Select the best answer then click Submit.

aterialscont

Which of the following is NOT a key element of a managed vision plan? **Learner options Provider Network** Place an X in the box В Lab arrangements to the left of the Plan documents correct answer(s). Patient's past record X Delete unused choices and text. Learner Feedback **Programming Instructions/** Learner Action **System Response** Select the relevant CA Click NEXT and branch to next Correct. answers then click page Click NEXT to continue. Submit. WA Show ticks and crosses next to Incorrect. Click NEXT to continue option. Click NEXT and branch to

Topic	Optimizing Managed Vision Care					
Screen ID	Template	Multiple Choice with Single Correct Answer				
Screen Conte	Screen Content					
Question –	16 Ainthis agende					

next page

Select the best answer then click **Submit**. The best way to view your patients who have managed vision care as opportunities or as GEMS. What does the "S" in GEMS stand for? **Learner options SILLY** Α Place an X in the box **SURLY** В to the left of the **SAVINGS** X C correct answer(s). **STUPENDOUS** Delete unused choices and text. Learner Feedback **Programming Instructions/** Learner Action **System Response** Select the relevant CA Click NEXT and branch to next Correct. Click NEXT to continue. answers then click page Submit. Show ticks and crosses next to WA Incorrect.

Topic	Optimizing Managed Vision Care		
Screen ID	Template	Multiple Choice with Single Correct Answer	

Click NEXT to continue.

option. Click NEXT and branch to

next page

Screen Content Question - 17 Select the best answer then click **Submit**. Which of the following documents explain provider reimbursements from the plan and the patient payment for various vision care services 300 **Learner options** Provider reimbursement summary X Place an X in the box В Provider protection policy to the left of the In-network cost report correct answer(s). Patient payment schedule Delete unused choices and text.

Learner Action	Learner	Feedback	Programming Instructions/ System Response
Select the relevant answers then click		Correct. Click NEXT to continue.	Click NEXT and branch to next page
Submit.	-08	Incorrect. Click NEXT to continue.	Show ticks and crosses next to option. Click NEXT and branch to next page

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Which of the when work	ne followin ing with m		click Submi ties would No vision care?	OT contribute to your Optical's profitability	
Place an X in to the left of correct answ Delete unuse choices and	the box the ver(s).	X B C	Focus on Understa	the major plans of your patient base selling only what the plan covers and how plans reimburse high capture rate of managed care patients	
Learner Actio	on Lear	rner Fee	dback		Programming Instructions/ System Response

Select the relevant answers then click		Correct. Click NEXT to continue.	Click NEXT and branch to next page
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Topic | Optimizing Managed Vision Care | Screen ID | Template | Multiple Choice with Single Correct Answer | Screen Content | Question – 19 | | Select the best answer then click Submit. | The Acronym used to define the opportunities Managed Care patients bring to the practice is:

Learner options
Place an X in the box

Delete unused choices and text.

correct answer(s).

	Α		
	В		
Χ	С	C GEMS	
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Learner Action	Learner	r Feedback	CONS	Programming Instructions/ System Response
Select the relevant answers then click		Correct. Click NEXT to continue.		Click NEXT and branch to next page
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Topic Optimizing Managed Vision Care

Screen ID Template Multiple Choice with Single Correct Answer

Screen Content

Question - 20

Select the best answer then click Submit.

Materials cont

Each managed vision care plan has different requirements for provider network participation **Learner options** X True Place an X in the box False to the left of the correct answer(s). Delete unused choices and text. **Programming Instructions/** Learner Feedback Learner Action **System Response** Select the relevant CA Click NEXT and branch to next Correct. answers then click page Click NEXT to continue. Submit. Click NEXT to continue WA Show ticks and crosses next to option. Click NEXT and branch to

next page

Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Sent: Tuesday, February 13, 2024 6:07 PM

To: Shoven Paige Subject: **ABO Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS

217 N. Upper Street, Suite 201

Lexington, KY 40507

703-719-5800 • 800-296.

Dear Paige,

This letter will confirm that the American Board of Opticianry Education Committee approved the following online course:

Course: Pediatric Dispensing

Designation: Ophthalmic Level I

Course Number: STWEOA125-1

Expires: February 9, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

, scitica.com. You are necessing this amail because you submitted a course for approved global bands.

The standard of the course for approved global bands and the course global bands are considered global bands and the course global bands and the course global bands are considered global bands and the course global bands

Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Tuesday, February 13, 2024 6:19 PM Sent:

To: Shoven Paige

Subject: **NCLE Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS

217 N. Upper Street, Suite 201

Lexington, KY 40507

703-719-5800 • 800-296.

Dear Paige,

This letter will confirm that the National Contact Lens Examiners Education Committee approved the following online course:

Course: Pediatric Dispensing

Designation: Ophthalmic Level I

Course Number: CTWEOA007-1

Expires: February 9, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

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	To Whom It May Concern, I,Paige Shoven do certify that I am the author of the following Continuing Education credit that is being submitted to the American Board of Opticianry for consideration of approval.
	Pediatric Dispensing
	Best regards,
	Paige Shoven
	Paige Shoven
Materials	To Whom It May Concern, I,

Pediatric Dispensing

Leonardo Online, On Demand Learning

1 Hr, Tech 1 ABO course

Abstract

Offical Board Position Pediatric Dispensing is more than just fitting tiny adults with glasses. This class will compare and contrast the differences in patients as it relates to their age and the changing of their facial structure as they grow from infants to adults.

Timed Outline

Introduction

1. Video (3 minutes)

Discover the children's Category. In this video, there is a brief outline of the upcoming course

- 2. Children's Dispensing Needs (10 minutes)
 - a. Dispensing to Children
 - b. Critical Visual sills
- i. Visual Skills and Learning Development

 1. Visual Acuity

 2. Eye Focusing

 3. Eye Tracking

 1. Facial Characteristics

 Smaller PD

 Small-

 - c. Unique Facial Characteristics

 - ii. Smaller Bridge Height
 - iii. Undeveloped Nasal Bridge
 - iv. Less defined ear cartilage
 - v. Smaller head width and temple length
 - d. Prescription Analysis

is it a first-time prescription

- 1. Astigmatism
- 2. Hyperopic Prescription
- 3. Myopic Prescription
- ii. Is there a prescribed Prism
- iii. Is there a change in prescription since the last visit
- iv. Other recommendations from the doctor
- v. Prescriptions can be confusing to parents
- 3. Frame Requirements for Children (10 minutes)
 - a. Selecting the Right Frame
 - i. Finding the perfect fit
 - b. Taking Children's Measurements
 - i. The fitting Triangle

- ii. Facial measurements
 - 1. PD
- ction strued as requisition or official Broard position.

 Some of the construed as requisition of official Broard position.

 The last are not to be construed as required to the construction as required to the construed a. If the child is too small for a pupilometer
- b. If the child has strabismus
- 2. Bridge Height
 - a. Horizontal Center Line
 - b. Vertical Center Line
- 3. Temple width and head width
- 4. Bridge Shape
 - a. Frontal Angle
 - b. Splay Angle
- 5. Bridge Projection
 - a. Positive Projection
 - b. Negative Projection
 - c. How to measure bridge projection
- 4. Frame Characteristics (5 minutes)
 - a. Frame Styles
 - i. Frame Shape
 - 1. Age of the patient
 - 2. Prescription needs
 - 3. A size measurements
 - a. Temple Styles
 - 1. Types
 - i. Drop End (skull temples)
 - ii. Curl Ends (Cable Temples)
 - iii. Loop Ends (attachable straps)
 - ii. Frame Materials
 - 1. Rubber
 - 2. Plastic or Acetate
 - 3.5 Injected
 - Metal
 - 5. Titanium
 - Offering a Second Pair
 - Frame Colors
 - Child's age
 - vi. Recommendations
 - 1. Safety
 - 2. Durability
 - 3. Comfort
 - 4. Stability
 - 5. Aesthetics
 - b. Reassuring Parents about the quality of the frame
 - i. Warranty options
- 5. Lens Requirements for Children (15 minutes)

Materials contained in this agen

- a. Lens Materials
 - i. Plastic CR-39

- ...ective Coatings
 ...ints
 iii. Sunglasses
 llection and Aftercare for Children (10 minutes)
 a. As children are picking up their glasses, you want to set the tone to ensure they are leaving with a positive impression.
 i. Create a lasting great experience
). Teach them to care for their eyewear
 i. Ensure the dispensing appointment is time well specific in with them afterwards
 i. Continue by checking in
 ii. Why is this important
 iii. How to prepare '
 iv. What '

Test seems and the second of t

The trade of the t

Which of the following factors does not affect the choice of the lens index?

Select the correct answer.

Prescription (amount of refractive error)

Pupillary distance

Frame measurements

Lens tint

What is the best way to connect with older children?

Talk to them like a child using terms like "kids your age" and "child frames"

Use stickers as an incentive

Ask them about their favorite brands, styles, and any celebrity influencers they admire

Ask them about their budget

What lens material for children's eyeglasses should be avoided because of its lack safety features?

Polycarbonate

Trivex

High-index plastic

be construed When explaining how to look after eyewear, it's more important to address

The parent

The child

Both the parent and the child

The whole family

What is the recommended age for a child to have their first eye exam?

By the age of 3

By the age of 4

By the age of 5

By the age of 6

You should seek to build trust with:

The parents

Both parents and the child

The child

The entire family

How can you reassure a parent who is financially concerned about their child's eye care?

Use active listening skills to make them feel heard and recommend products that fit their child no matter the cost.

Communicate specific offers and insurance packages

Show them all the styles available to appeal to children with different tastes

Remind them their children's health should not have a price attached to it.

What should be communicated during the patient callback?

Negative words that can cause your patient to lose confidence in you

Positive words to make a good impression

Negative words that can lead to miscommunication

Mation of Offical Board position

Are anti-reflective coatings suitable for children?

In some situations where they will be extreamly careful with their glasses

Yes, most new AR technologies offer supperior scratch protection

No, children are not bothered by glare

Only after they become teenagers

Can uncorrected poor vision can affect a child's personality and adjustment in their daily life.

Yes

No

Only when they are at school

Only when they are in environments they feel safe in

Which of the following factors does not affect the choice of the lens index?

Prescription (amount of refractive error)

Pupillary distance

Frame measurements

Lens tint

Children of all ages may experience a range of emotions during their eye care visit. Which option below will have little effect on the dispensing process with a young child who has become tired and irritable?

Offer them a distraction such as a toy or a tool like a calculator, ruler, or even the pupillometer to stimulate their curiosity

Ask about their preferences and what they like to do

Take the time to explain the offer so they can make the right decisions

Suggest they take a break

Why is it important to stress that children should remove their eyewear using both hands?

Because children tend to have unsteady hands

Because removing it with just one hand can cause the frame not to fit properly

Because children's hands are small

Children should not remove their glasses themselves

Because of the size of the child they use of their lenses to see the world around them.

More

Less

The same amount

Just the top half

By age _____the facial structure of a child will generally match those of an adult.

10

11

12

13

When is the fastest period of growth for children's face shape and size?

Between 1 and 3 years

Between 0 and 2 years

Between 2 and 4 years

Between 4 and 6 years

Which of the following is not a skill needed for effective reading?

Color Vision

Eye Focusing

Visual Acuity

Eye Tracking

An underdeveloped nasal bridge can give children negative or zero bridge projection, and this can cause the eyelashes to rub against the back of the lens. What can be done to prevent this?

Adjust the lens curvature

Adjust the lens thickness

Choose a frame with a pantoscopic tilt

Choose a frame with no pantoscopic tilt

If you're looking for a child's frame that is easily molded, strong, flexible, lightweight, and can withstand heat and cold, which material option would you choose?

Plastic

Rubber

Injected

Metal

What could be the benefit of adding a small amount of pantoscopic tilt to the frame?

Choose a frame with a positive bridge protection

Helps prevent the frame from irritating the skin

Helps create a more aesthetic appearance

whing are proposed in this agenda are proposed in this agent agenda are proposed in this agent age Helps prevent eyelashes from rubbing against the back of the lenses or offical Board position

Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Sent: Tuesday, February 13, 2024 6:06 PM

To: Shoven Paige

Subject: **ABO Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS

217 N. Upper Street, Suite 201

Lexington, KY 40507

703-719-5800 • 800-296.

Dear Walter,

This letter will confirm that the American Board of Opticianry Education Committee approved the following online course:

Course: Understanding Prismatic Effect

Designation: Ophthalmic Level I

Course Number: STWEOA126-1

Expires: February 9, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

, scitica.com. You are necessing this amail because you submitted a course for approved global bands.

The standard of the course for approved global bands and the course global bands are considered global bands and the course global bands and the course global bands are considered global bands and the course global bands

Garnett, Heather (DPOR)

From: kaviles@abo-ncle.org

Tuesday, February 13, 2024 6:19 PM Sent:

To: Shoven Paige

Subject: **NCLE Course Approval**

Follow Up Flag: Follow up Flag Status: Flagged

WARNING: EXTERNAL EMAIL

AMERICAN BOARD OF OPTICIANRY

NATIONAL CONTACT LENS EXAMINERS

217 N. Upper Street, Suite 201

Lexington, KY 40507

703-719-5800 • 800-296.

Dear Walter,

This letter will confirm that the National Contact Lens Examiners Education Committee approved the following online course:

Course: Understanding Prismatic Effect

Designation: Ophthalmic Level I

Course Number: CTWEOA006-1

Expires: February 9, 2027

This course has been approved for 3 years.

Thank you for your continued commitment to quality education. If you have any questions regarding the above, please feel free to call the office at (703) 719-5800

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The standard of the course for approved global bands and the course global bands are considered global bands and the course global bands and the course global bands are considered global bands and the course global bands

To Whom It May Concern,

I certify that I have completed the following course in no less than the number of credit hours (1) requested for approval.

UNDERSTANDING PRISMATIC EFFECT

Sincerely,

Brooks K Carrasco

Brooke Carrasco, ABOC, NCLE

To Whom It May Concern,

I certify that I have completed the following course in no less than the number of credit hours (1) requested for approval.

UNDERSTANDING PRISMATIC EFFECT

Sincerely, and the same of the

Paige Shoven, ABOC

of of the position of office the position of

CEC: UNDERSTANDING PRISMATIC EFFECT

- 2. Lescription: provides detailed information on how to read prism in a lensometer to identify the amount and base direction of the prism in a lens.

 2. Understanding Prismatic Effect: describes how to identify lens power in different types of lenses. It also provides a detailed description of how to use Prentice Rule in measuring the power of a lens.

 3. Balancing Prescribed Prism: explains the difference between and the purpose of balancing prism. It also balancing prism.

Course Outline w/timing:

- 1) Understanding Prism In a Prescription (15 min)
 - a) Introduction
 - i) Understanding Prescribed Prisms
 - ii) Understanding Induced Prisms
 - b) Course Objectives
 - i) Describe the two types of prism (prescribed and induced) that can exist in a
 - ii) Explain the base direction of any existing prescription
 - iii) Use the lensometer to identify the amount and base direction of prism in a lens
 - iv) Identify common problems unwanted and induced prism can cause for the patient
 - v) Follow industry protocol for reordering lenses exceeding prism tolerances
 - Visualizing Prism in a Lens
 - i) Prisms are the building blocks of lenses
 - ii) Plus lenses are a combination of prisms base to base
 - Minus lenses are a combination of prisms apex to apex
 - Base In Prism
 - v) Base Out Prism
 - vi) Base Down Prism
 - vii) Base Up Prism
 - d) Checking Prism with a Lensometer
 - i) Reading Prescribed prism
 - Measuring Induced prism
 - iii) Reading prism on a Lensometer
 - (iv) What Patients may experience due to unwanted prism
 - Industry Protocol for reordering lenses exceeding tolerances
 - i) Return the lenses to the lab that made them
 - ii) Excessive prism should be
- Materials contained in this) **Key Takeaways**
 - i) Able to describe the two types of prism (prescribed and induced)
 - Able to explain the base direction of any existing prescription
 - Learned to identify common problems unwanted and induced prism can cause for the patient

- 2) Understanding Lens Power and Prismatic Effect (20 min)
 - a) Course Objectives
 - i) Visualize all lenses as a combination of prisms
 - ii) Describe lens power in both spherical and cylindrical lenses
 - iii) Transpose any cylinder prescription into either plus or minus cylinder form
- regulation or official Board position Find the power of any lens in the two major meridians of 90 degrees and 180 degrees
 - v) Use the Prentice rule formula to compute prismatic effect
 - b) Spherical and Cylindrical Lenses
 - i) Lens Power in Spheres
 - ii) Describing a Cylinder lens
 - iii) Rules of Transposition
 - c) Prismatic Effect Calculations
 - i) Resolving powers in axes 180 and axes 90: All or Nothing
 - Resolving power with axes of 45 or 135: Half and Half
 - iii) Resolving power with oblique axes: Use the Table
 - The Prentice Rule Formula translates Variables into real objective values of prismatic effect
 - i) Lateral Prismatic Effects due to Centration Errors
 - **Key Takeaways**
 - i) A spherical lens is formed when a front curve of singular dioptric power is combined with a back curve of singular dioptric value. The lens which results from that combination is spherical since it has only one overall dioptric power
 - In order to derive lens power, you must use a lens clock to read the power of the front curve and add it to the power of the back curve. The resulting value is the lens power
 - Unlike a sphere, which has only one power, a cylindrical lens has two separate meridians of power. The meridian with the strongest power is called the "major" meridian, and the meridian with the weakest power is called the "minor" meridian
 - iv) The same lens can be designated in two ways without changing the actual power of the cylinder lens. The two forms of a cylinder lens are known as "plus cylinder form" and "minus cylinder form"
 - v) The process of switching from one form of cylinder to another is called transposition. The rules of transposition are as follows:
 - add cylinder to sphere vi) change sign of cylinder
 - shift axis by 90 degrees by adding 90 to an axis of 90° or less, or subtracting 90 from an axis of 91° or greater
 - By calculating prismatic effects, you can determine the quality and efficiency of any lens. In order to do so, you need to calculate the amount of cylinder at a given angle of the lens. At 180° or 90°, it is all power or no power. At axes 45° and 135°, it is split half and half. Any angle in between, a table is used to get the amount of cylinder power
 - The Prentice rule helps you calculate the amount of prismatic effect at a given point. The amount of prismatic effect is equal to (Distance in millimeters X Lens Power) / 10
 - x) When the optical centers of the lenses are centered with the center of the patient's pupils there is no induced prismatic effect. Any misalignment will lead to induced prism. The direction of the base of the induced prism will depend on the type of lens (minus or plus power) and the direction of the misalignment

Waterials contained in this agenda

- 3) Balancing Prescribed Prism (15 min)
 - a) Course Objectives
 - i) Know the difference between prescribed prism and induced prism
 - ii) Explain the purpose of balancing prescribed prism
 - Know and explain the rules of prism canceling and compounding
 - Know and explain the rules of balancing prescribed prism
 - v) Know and explain how to balance prescribed prism in an actual prescription
 - b) Prescribed vs Induced Prism
 - i) Prescribed prism helps those with misaligned optical axis
 - ii) Normal binocular vision
 - iii) The different types of Strabismus
 - iv) Prescribing prism to help patients with Strabismus
 - Base direction of prescribed prism
 - vi) Causes of Induced Prism
 - c) The Rules for Balancing Prism
 - i) Balancing Prism created better cosmetics
 - ii) Out of balance or unbalanced prism
 - iii) Splitting prism
 - iv) Examples
 - d) Key Takeaways
- Restrued as regulation or official Board position of official Board positio i) Prism can be prescribed by the doctor to address misalignment of the patient's
 - Prism can also be induced due to fabrication or fitting error.
 - The desired effect of prescribed prism can be loaded all into one eye (i.e., in one lens) or preferably balanced between both eyes.
 - iv) The reason we split the prism (between lenses) is to create better cosmetics by balancing thickness and better wearing comfort by balancing weight.
 - If the prescribed prism is up or down, the split should be distributed with up in one eye and down in the other.
 - In the case of prescribed prism in or out, the base direction should be the same in both eyes and in the same direction as the prescribed prism

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	Place an of the lef				В	improve	visual acuity vs. a non-split prism.					
	correct a			X	С	improve	improve cosmetics and comfort by dividing thickness and weight evenly.					
					D	reduce vertical prismatic imbalance.						
	Delete unused choices and text.						John Stranger					

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Learner							<u>ille</u>						
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٦	Гext	Which	of the	follow	/inc	ı is an exar	nple	of compo	unding	prism?		101				
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Programming Inst	ructions/	System Response Move to next frame	
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Title	Questio	n 4							KICO.				
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			ay to	bala	ance this?			Julan					
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	Text	Whe	never a	э р	resc	cribe	ed prism	is split,	it is	import	ant to	o keep	the	70/4			the	e same i	n the
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T	opic	U	Inderst	andir	g Le	ns Power	and Prismatic Effect
S	creen II	D			T	emplate	Multiple Choice with Single Correct Answer
S	creen C	ontent			-		
	Title	Questi	ion 6				offico.
	Prompt	Select	the be	st an:	swer	then click	Submit.
	Text	The po	oint in a	a lens	thro	ough whicl	n light passes without being deviated is the
L	earner o	options					
			_		Α	Fitting R	eference Point
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P	rogram	mina In	structio	nns / S	ivete	m Resnon	se Move to next frame

Programming Ins	tructions	/ System Response	Move to next frame	
Learner Action		r Feedback	Dollar of die	Programming Instructions/ System Response
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Topic		Underst	andir	ng Le	ns Power	and Prisma	tic Effect		480
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Screen C	ontent			-					
Title	Ques	stion 7							Kico
Prompt	Seled	ct the be	est an	swer	then click	Submit.			of O
Text	Minu	s lenses	dive	rge li	ght, creat	ng a			
Learner o	option	S							
		_		Α	Real foca	l point		,e ^O)	
Place an to the lef			B Magnified image						
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				D	Inverted	image		Silv	
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and text.								OS	
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Program	ming 1	instruction	ons/S	Syste	m Respon	se Move	to next fran	1e	
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Topic	Underst	andir	g Le	ens Power	and Prismatic Effect
Screen ID			T	Template	Multiple Choice with Single Correct Answer
Screen Conter	nt				
Title Que	estion 8				į KiC'S.
Prompt Sele	ect the be	st an	swer	then click	Submit.
Text What	at is the p	roces	s of	switching	from one cylinder form to another cylinder form called?
Learner option	ns				
			Α	Transubs	stantiation
Place an X in t			В	Transduc	ction
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Programming	Instruction	ons/ S	yste	em Respon	se Move to next frame

Programming Inst	ructions/	System Response Move to next frame	
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٦	opic		Underst	andin	g Le	ens Power a	and Prismatic Effect
5	Screen II	D			T	emplate	Multiple Choice with Single Correct Answer
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	Title	Ques	tion 9				EKIC OF
		Selec	t the be	st ans	swer	then click	k Submit.
	Text	at 68 effec Presc OD		.0 mm s job? 2.00 X	too (04!	o wide in ea	is 64 mm or (32 mm in each eye). The centers from the lab were ground each eye). Based on the following prescription, what is the total prismatic
Į,	earner of the left correct a	X in that t of the	e box e	X	A B C	.20 diopt .10 diopt .70 diopt	ters ters
	Delete un and text.		choices		U	i iso diop	Oratt Polo. July July July

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Programming Inst	tructions	/ System Response Move to next frame	
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Topic	Underst	tandir	g P	rism in a Pi	rescription
Screen ID			1	Template	Multiple Choice with Single Correct Answer
Screen Cont	ent				
Title Q	uestion 10				itico.
Prompt Se	elect the be	est an	swei	r then click	Submit.
Text W	/hich descri	ption	accı	urately des	cribes a <u>diopter of prism</u> ?
Learner opt	ions				
		X	A	Deflects	light one centimeter at a distance of one meter
Place an X in			В	Focuses	light at a distance of one meter 🌮
correct ansi			С	Creates a	a real image with a magnification of 1.0x
			D	Creates a	a virtual image in front of the lens
Delete unus and text.	ed choices				2001
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Programming Ins	tructions	/ System Response	Move to next frame	
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Topic		Underst	andii	ng Pi	rism in a Pi	Prescription	
Screen I	D			1	Template	Multiple Choice with Single Correct Answer	
Screen C	ontent			-			
Title	Quest	tion 11				Hico.	
Prompt	Selec	t the be	st an	iswei	r then click	k Submit.	
Text	When	the pu	pil is	aligr	ned with th	his point on the lens, the wearer will not experience unpres	cribed prism in
	well-d	designe	d len	ses.		J. Hat.	
Learner	options					10 ⁰	
	v:		X	Α	Optical	Center	
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				D	Focal Poi	oint college	
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Topic	Unders		Power and Prismatic Effect	760
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Screen Conter				
Title Que	stion 12			of the Co
Prompt Sele	ect the be	st answer th	en click Submit .	O.
Text What	at kind of	prism is indu	uced when eye wear is fabricated	with optical centers that are wider than the
pati	ent's PD-	assuming th	ne patient is a <i>myope</i> (minus pow	vered lenses)?
Learner option	าร			, ØS
Place an X in t	he hox		ase Up prism	
to the left of t			ase Down prism	
correct answe	er(s).		ase Out prism	
Delete unused	choices	X D B	ase In prism	Ò.
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Programming	Instructi	ons/ System	Response Move to next frame	
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click Submit.	WA	Incorrect	_ iisco at PS	Click NEXT and branch to ne
		Click NEX	(T to continue)	page
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Topic	Uı	ndersta	andir	na Le	ens Power	and Prismatic	Effect		1003,	
Screen			-		emplate	Multiple Choi		gle Correct Ar	nswer	
Screen	Content								N. C.	
Title	Questic	Question 13								
Promp	Select	the bes	st an	swer	then click	Submit.				
Text	A tool o	called a	i		is	used to read	the precise	amount and	direction of prismatic effect in any	
	lens.						·		di.	
Learner	options	P		1 _	Τ_			,e ^O		
Place ai	n X in the I	box	X	A	Lensom			700		
to the le	eft of the			В	Distomet			wy.		
correct	answer(s	5).		C D	Pupilome Refractor			alisti		
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Screen Conten						C'0		
द्वट	Title Question 14							
Prompt Sele						, O		
					cross at a point to the right of the reticule's	center circle (while measu		
)S lens),	there	e is	pris	m at the point of the lens being measured.			
Learner option	ıs		A Ba	ase Up	nricm			
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Programming					se Move to next frame	Durante Turker I		
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Topic		Unders	tandi	ing L	ens Power	and Prismatic Effect			
Screen ID Template Multiple Choice with Single Correct Answer									
Screen C	ontent			<u> </u>					
Title	Ques	tion 15				ţĘŢŢĊŎ.			
Prompt	Selec	t the b	est ai	nswe	r then click	Submit.			
Text	What	directi	on of	prisi	n might be	prescribed to assist a person with esotropia (eye turns in) achieve			
	binoc	ular vis	sion?			llait			
Learner of	options					180°			
		_		A Base UP prism					
Place an to the lef				B Base DOWN prism					
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and text.									
Program	ming I	nstruct	ions/	Syst	em Respon	se Move to next frame			
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Topic Understanding Lens Power and Prismatic Effect									
Screen II				Ĭ.	Template	Multiple Choice with Single Correct Answer			
Screen Co	ontent					, Ko			
Title	Questi	on 16				KKIC'S			
Prompt	Select	the be	st an	swe	r then click	Submit.			
Text	What a	amount	t of p	rism	exists in a	a +4.00 sph lens at a point 4mm below the optical center?			
Learner o	ptions		-						
			X	Α	1.6∆ Bas	se Up			
Place an I		box		В	0.8∆ Bas	se Down			
to the left correct a		s).		С	1.6∆ Bas	se Down			
correct answer (s).				D	0.8Δ Base Up				
Delete un	used ch	oices		•	•	COL			
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Topic Understanding Lens Power and Prismatic Effect							and Prismatic Effect			
•	Screen I	D			T	emplate	Multiple Choice with Single Correct Answer			
9	Screen Content									
	Title	Quest	tion 17				Kico.			
	Prompt	Select	t the be	st ans	swer	then click	Submit.			
	Text	Given	the foll	lowing	j Rx	, how muc	h vertical prismatic imbalance will occur at a point 8mm below the optical			
		cente	center?							
			5.00 sp 1.00 -4		090)	20 25 TC			
I	Learner						E. W. L. C.			
			_		Α	There wil	l be no prismatic imbalance			
	Place an X in to to the left of the correct answe			X	В	3.2∆ pris	sm 🔎 📉			
					С	1.6∆ pris	m "V			
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Topic	Ur	nderst	andir	ng Le	ns Power	and Prismatic Effect		100
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Title Question 18								KICO
Prompt	Select t	the be	st an	swer	then click	Submit.	o's	0,
Text	that is	produ	cing _.				, Ilali	at a point through the lens oks like its tilted downward."
Learner o	ptions						.00	
				Α	Base Out	t prism	chi	
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	•			D	Base Dov	wn prism		
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T	opic		Understa	andin	g Le	ns Power an	d Prismatic E	ffect			76	3	
S	creen II)			T	emplate M	Aultiple Choic	e with Sing	gle Correct Ar	nswer	Silve		
S	Creen Co	ontent			-						N. P.		
	Title	Question 19								FIN	10		
	Prompt	Selec	Select the best answer then click Submit .										
	Text	A pat	A patient has the following Rx:										
		OD -0.50 sph											
			•		80 /	ADD OU +2.0	00		(CO)				
									S				
		The p	atient w	ears	a FT	28 and read	ls at a point 8	mm below	the optical c	enter. F	low muc	ch vertica	al
		imbalance exists at the reading point?											
L	Learner options							C.	oll				
	Place an X in the		_		Α	There will b	oe no prismati	ic imbalan	ce				
					В	3.2∆ prism		1,10					
L	to the left of the					4 4							

correct answer(s).

Delete unused choices and text.

	Α	There will be no prismatic imbalance
	В	3.2∆ prism
X	С	1.6 Δ prism 🔊 🚫 ¯
	D	1.2∆ prism

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