

Name of College: Dr. D.Y. Patil Institute of Optometry & Visual Sciences			
Name of Department: Optometry			
Course: B. Optometry		Academic Year: 2022-23	Batch: first year
Topic: Vergence Lesson Title: Introduction and lens power calculation Learning Outcomes: At the end of the lecture, student can make calculation from Diopter to focal length and vice versa. Specific Learning Objectives: <ol style="list-style-type: none"> 1. Define Vergence, Convergence and Divergence. 2. Explain its equation. 3. Calculation of power and focal length calculation 			
Instructional Method: Lecture			
Duration: 120 minutes			
Time: (Day 1) 60 min.	Activity Description Introduction of Vergence Equation Formula Calculation	Resources/A.V. Aids PPT, white board	Assessment Method Assignment
(Day 2) 60 min	Calculation(practice)	White board	Assignment
List of Learning Resources System of ophthalmic dispensing : Clifford W. Brooks and Irvin M Borish A textbook of Optics N. Subramaniam and Brij Lal			

Name of College: Dr. D.Y. Patil Institute of Optometry & Visual Sciences			
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Course: B. Optometry		Academic Year: 2022-23	Batch: first year
<p>Topic: Schematic eye Lesson Title: Gullstrand's exact schematic eye, Donder's reduced eye, stile Crawford experiment Learning Outcomes: At the end of the lecture, student knows the standard values of various parameters of the eye. Specific Learning Objectives:</p> <ol style="list-style-type: none"> 1. Introduction to Gullstrand's Schemetic eye 2. Explain Refractive Components of eye 3. Enlist parameters of tear film, cornea, lens, aqueous, Vitreous 			
Instructional Method: Lecture			
Duration: 60 minutes			
Time:	Activity Description	Resources/A.V. Aids	Assessment Method
10 min	Introduction to Gullstrand's Schemetic eye	PPT, white board	Assignment
5 min	Explain Refractive Components of eye		
45 min	Enlist parameters of tear film, cornea, lens, aqueous, Vitreous		
List of Learning Resources			
System of ophthalmic dispensing : Clifford W. Brooks and Irvin M Borish A textbook of Optics N. Subramanium and Brij Lal			

Name of College: Dr. D.Y. Patil Institute of Optometry & Visual Sciences			
Name of Department: Optometry			
Course: B. Optometry		Academic Year: 2022-23	Batch: first year
<p>Topic: Emmetropia and ametropia Lesson Title: emmetropia Learning Outcomes: At the end of the lecture, student knows the standard values of various parameters of the eye as well as phenomenon of light focusing on retina Specific Learning Objectives:</p> <ol style="list-style-type: none"> 1. Define emmetropia 2. Explain the standard values of curvature and axial length 3. Compensatory mechanism of axial length and curvature in focusing light rays on retina 			
Instructional Method: Lecture			
Duration: 60 minutes			
Time:	Activity Description	Resources/A.V. Aids	Assessment Method
20 min.	Introduction to emmetropia and ametropia	PPT, white board	Assignment
10 min	Explain the standard values of curvature and axial length		
20 min	Different conditions of emmetropia and types of ametropia		
10 min	Doubt solving session		
List of Learning Resources			
Clinical refraction Borish			
Optics and refraction A.K.Khurana			
Clinical optics Fennin & Troy			

Name of College: Dr. D.Y. Patil Institute of Optometry & Visual Sciences			
Name of Department: Optometry			
Course: B. Optometry		Academic Year: 2022-23	Batch: first year
Topic: Emmetropia and ametropia Lesson Title: ametropia (Myopia) Learning Outcomes: At the end of the lecture, student has in depth knowledge of Myopia Specific Learning Objectives: <ol style="list-style-type: none"> 1. Define myopia with a ray diagram 2. Explain optics and etiology of myopia 3. Enlist types of myopia 4. Explain Sign and symptoms 5. Discuss treatment option 			
Instructional Method: Lecture + demonstration			
Duration: 180 minutes			
Time:	Activity Description	Resources/A.V. Aids	Assessment Method
(Day 1) 10 min.	Introduction of Myopia	PPT, white board	Short answer question Long answer question posters
20 min	Myopia definition Optics of myopia		
30 min	Etiology of myopia		
(Day 2) 30 min	Types of myopia	PPT, white board	MCQs/Fill in the blanks/True-False
10 min	Sign and symptoms of myopia		
20 min	Treatment of myopia		
(Day 3) 60 min	Demonstration /practical Revision and question answer session	Trial box, Trial Frame	assignment
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Course: B. Optometry		Academic Year: 2022-23	Batch: first year
<p>Topic: Emmetropia and ametropia Lesson Title: ametropia (Hypermetropia) Learning Outcomes: At the end of the lecture, student has in depth knowledge of Hyperopia. Specific Learning Objectives:</p> <ol style="list-style-type: none"> 1. Define Hypermetropia with a ray diagram 2. Explain optics and etiology of Hypermetropia 3. Enlist types of Hypermetropia 4. Explain Sign and symptoms 5. Discuss treatment option 			
Instructional Method: Lecture + demonstration			
Duration: 180 minutes			
Time:	Activity Description	Resources/A.V. Aids	Assessment Method
(Day 1) 10 min.	Introduction of Hypermetropia	PPT, white board	Short answer question Long answer question posters
20 min	Hypermetropia definition Optics of Hypermetropia		
30 min	Etiology of Hypermetropia		
(Day 2) 25 min	Classification of Hypermetropia	Trial box, Trial Frame	MCQs/Fill in the blanks/True-False
10 min	Sign and symptoms of Hypermetropia		
25 min	Treatment of Hypermetropia		
(Day 3) 60 min	Demonstration /practical Revision and question answer session	Trial box, Trial Frame	assignment

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Course: B. Optometry		Academic Year: 2022-23	Batch: first year
Topic: Emmetropia and ametropia Lesson Title: ametropia (Astigmatism) Learning Outcomes: At the end of the lecture, student has in depth knowledge of astigmatism. Specific Learning Objectives: <ol style="list-style-type: none"> 1. Define Astigmatism with a ray diagram 2. Explain optics and etiology of Astigmatism 3. Enlist types of Astigmatism 4. Explain Sign and symptoms 5. Discuss treatment option 			
Instructional Method: Lecture + demonstration			
Duration: 120 minutes			
Time: (Day 1) 10 min. 20 min 30 min	Activity Description Introduction of astigmatism Definition of astigmatism Optics of astigmatism Etiology of astigmatism	Resources/A.V. Aids PPT, white board	Assessment Method Short answer question Long answer question posters
(Day 2) 30 min 10 min 20 min	Types of astigmatism Sign and symptoms of astigmatism Treatment of astigmatism	PPT, white board	MCQs/Fill in the blanks/True-False
(Day 3) 60 min	Demonstration /practical Revision and question answer session	Trial box, Trial Frame	assignment

List of Learning Resources

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 Optics and refraction A.K.Khurana

Name of College: Dr. D.Y. Patil Institute of Optometry & Visual Sciences			
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Course: B. Optometry		Academic Year: 2022-23	Batch: first year
<p>Topic: Correction of spherical ametropia Lesson Title: Correction of spherical ametropia Learning Outcomes: At the end of the lecture, student knows the optics behind giving correction of refractive errors. Specific Learning Objectives:</p> <ol style="list-style-type: none"> 1. Explain the far point and retina as a conjugate points 2. Discuss the placement of far points according to the type of refractive errors 			
Instructional Method: Lecture + demonstration			
Duration: 60 min			
Time:	Activity Description	Resources/A.V. Aids	Assessment Method
60 min.	Lecture	PPT, white board	Short answer question Long answer question
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Clinical optics Fennin & Troy			

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Course: B. Optometry		Academic Year: 2022-23	Batch: first year
Topic: Presbyopia Lesson Title: Presbyopia Learning Outcomes: At the end of the lecture, student knows the presbyopia, its mode of correction and guidelines to prescribe the presbyopic addition Specific Learning Objectives: <ol style="list-style-type: none"> 1. Define Presbyopia, terminology-punctum proximum, punctum remotum, amplitude of accommodation 2. Estimation of prescribing presbyopic add as per age 3. Treatment option of prescribing presbyopia 4. Guideline in prescribing presbyopic add 			
Instructional Method: Lecture + demonstration			
Duration: 180 min			
Time:	Activity Description	Resources/A.V. Aids	Assessment Method
(Day 1) 15 min.	Introduction of presbyopia	PPT, white board	MCQs, Short answer question Long answer question
25 min	Definition of presbyopia & Terminologies		
20 min	Sign and symptoms of Presbyopia		
(Day 2) 15 min.	Estimation of presbyopic add according to age	PPT, white board	MCQs/Fill in the blanks/True-False
25 min	Treatment of presbyopia		
20 min	Guidelines of prescribing presbyopic add		
(Day 3) 60 min	Demonstration /practical Revision and question answer session	Trial box, Trial Frame	assignment
List of Learning Resources			

Clinical refraction Borish Optics and refraction A.K.Khurana

Name of College: Dr. D.Y. Patil Institute of Optometry & Visual Sciences			
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Course: B. Optometry		Academic Year: 2022-23	Batch: first year
<p>Topic: Aphakia Lesson Title: Aphakia Learning Outcomes: identify aphakia, its optics, its sign and symptoms, treatment, and its advantages and disadvantages of various mode of correction. Specific Learning Objectives:</p> <ol style="list-style-type: none"> 1. Define Aphakia, explain optics of aphakia 2. Discuss sign and symptoms 3. Treatment of Aphakia 4. Advantages and disadvantages of various aphakic correction 			
Instructional Method: Lecture + demonstration			
Duration: 180 min			
Time:	Activity Description	Resources/A.V. Aids	Assessment Method
(Day 1)			
10 min	Introduction of Aphakia	PPT, white board	MCQs, Short answer question Long answer question posters
30 min	Define Aphakia,		
20 min	explain optics of aphakia Parameters in aphakic eye		
(Day 2)			
10 min	Sign and symptoms of aphakia	PPT, white board	MCQs/Fill in the blanks/True-False
10 min	Treatment of Aphakia		
40 min	Advantages and disadvantages of various modes of treatment		
(Day 3)			
60 min	Demonstration /practical Revision and question answer session	Trial box, Trial Frame	assignment

List of Learning Resources Optics and Refraction A.K. Khurana Clinical Optics by Borish			
Name of College: Dr. D.Y. Patil Institute of Optometry & Visual Sciences			
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Course: B. Optometry		Academic Year: 2022-23	Batch: first year
Topic: Spectacle and Relative spectacle magnification Lesson Title: Spectacle and Relative spectacle magnification Learning Outcomes: students have knowledge of difference in retinal image size. Specific Learning Objectives: <ol style="list-style-type: none"> 1. Define spectacle magnification 2. Explain image size with and without correction and with schematic eye 			
Instructional Method: Lecture + demonstration			
Duration: 60 min			
Time:	Activity Description	Resources/A.V. Aids	Assessment Method
60 min.	Lecture Demonstration	PPT, white board	Short answer question Long answer question
List of Learning Resources Clinical Optics: Fennin and Troy			

Name of College: Dr. D.Y. Patil Institute of Optometry & Visual Sciences			
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Course: B. Optometry		Academic Year: 2022-23	Batch: first year
<p>Topic: Entrance and Exit pupil Lesson Title: entrance pupil and exit pupil Learning Outcomes: students can understand the phenomenon of entrance and exit pupil and able to apply them in various optical instruments. Specific Learning Objectives:</p> <ol style="list-style-type: none"> 1. Define Entrance and Exit pupil 2. Explain ray diagram of entrance and exit pupil 			
Instructional Method: Lecture			
Duration: 60 min			
Time:	Activity Description	Resources/A.V. Aids	Assessment Method
60 min.	Lecture	PPT, white board	Short answer question
<p>List of Learning Resources Clinical Optics: Fennin and Troy</p>			

Name of College: Dr. D.Y. Patil Institute of Optometry & Visual Sciences			
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Course: B. Optometry		Academic Year: 2022-23	
Batch: first year			
Topic: Telescope			
Lesson Title: Telescope			
Learning Outcomes: students know the Principle, types of telescope, its optics, type of image formed, and its uses.			
Specific Learning Objectives:			
<ol style="list-style-type: none"> 1. Introduction and principle of telescope 2. Explain type of telescope 3. Explain the ray diagram of telescope with type of image formed 4. Comparison of telescopes 			
Instructional Method: Lecture			
Duration: 120 min			
Time:	Activity Description	Resources/A.V. Aids	Assessment Method
(Day 1)			
10 min.	Introduction of telescope	PPT, white board, Trial box	Short answer question Project
10 min	Principle of telescope		
20 min	Types of telescope		
10 min	Its Advantages and disadvantages		
10 min	Question and answer session		
(Day 2)			
45 min	Ray diagram of different telescope and its practice	white board	Assignment
10 min	Doubt solving session and summarizing the lecture		
List of Learning Resources			
Clinical Optics: Fennin and Troy			

Name of College: Dr. D.Y. Patil Institute of Optometry & Visual Sciences			
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Course: B. Optometry		Academic Year: 2022-23	Batch: first year
<p>Topic: microscope Lesson Title: microscope Learning Outcomes: students know the Principle, types of microscope, its optics, type of image formed, and its uses. Specific Learning Objectives:</p> <ol style="list-style-type: none"> 1. Introduction and principle of microscope 2. Explain type of microscope and angular magnification 3. Explain the ray diagram of microscope with type of image formed 			
Instructional Method: Lecture			
Duration: 60 min			
Time:	Activity Description	Resources/A.V. Aids	Assessment Method
5 min.	Introduction of microscope	PPT, white board	Short answer question assignment
10 min	Types of microscope		
20 min	Principle of microscope		
20 min	Ray diagram of microscope and equation to calculate the angular magnification		
5 min	Doubt solving session		
List of Learning Resources			
Clinical Optics: Fennin and Troy			