

Course Description

Course number: BMT 227		Course title: Introduction to Personal Computing																																														
Level/semester: Level 5																																																
Credit hours:	The # of lecture hours: 1 hours/week																																															
	The # of practical hours: 1 hours/week (1 hour = 2 practical hours)																																															
Language: English																																																
Aims and goals/ skills of the course:	<p>Aims Improve the student skill in basics of computer use.</p> <p>Skills a- Cognitive - Critical thinking - computing problem solving</p>																																															
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Level/semester: Level 4																																																						
Credit hours:	The # of lecture hours: 2 hours/week																																																					
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Aims and goals/ skills of the course:	<p>Aim: Introduce optometry students to understand the ocular anatomy and physiology. This knowledge of anatomy and physiology of ocular parts can be used in clinical situations.</p> <p>Skills</p> <p>b- Knowledge</p> <ul style="list-style-type: none"> - Student should learn about the unique problems associated with ocular parts such as cornea, lens and retina etc <p>c- Cognitive</p> <ul style="list-style-type: none"> - Critical thinking - Problem solving - Judgment call 																																																					
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Aims and goals/ skills of the course:	<p>Upon completion of this course, the student should be able to:</p> <ul style="list-style-type: none"> • Name the theories of light and rank wavelengths according to length • Define terminology relating to the behavior of light • Solve optical problems in experimental and clinical settings, regarding the behavior, management, and manipulation of light, and image formation. • Describe the behavior of light when it enters a prism • Understand image formation by plane mirrors, spherical convex mirrors, concave mirrors, their properties of the image and magnification • Define thin and thick lenses, types, power, formula, focal lengths, surface power, and image formation 																																			
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Course number: OPTO 253		Course title: Ophthalmic Optics I																																			
Level/semester: Level 5																																					
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Aims and goals/ skills of the course:		<p>Upon completion of this course, the student should be able to:</p> <ul style="list-style-type: none"> ➤ the ophthalmic applications of physical and geometrical optics. ➤ Introduction to lens and lens materials, ➤ Plastic materials, Curvature, ➤ Surface powers and forms of lenses, ➤ Crossed cylinders, ➤ Toric lenses, ➤ Prisms, ➤ Risley prisms and Fresnel press-on prisms, ➤ Lens aberrations, ➤ Frames and mounting. <p>Skills</p> <p>a- Cognitive skills to be developed</p> <ul style="list-style-type: none"> - Critical thinking - Problem solving - Judgment call <p>b- Knowledge skills</p> <ul style="list-style-type: none"> - this course will provide the student with the knowledge and practical application to be able to describe and define 																																			
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Aims and goals/ skills of the course:		Aims: <ol style="list-style-type: none"> To teach the student how to perform basic visual examination techniques To perform essential visual examination techniques combined their theoretical knowledge. Skills: <ul style="list-style-type: none"> How to communicate with patients, instructors, and clinical staff. How to deliver information to patients in a professional way. Teach students how to deal with different patients' personalities and attitudes. 																																																							
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Final examination	1	2																																																							
Examination		Practical Exam (20), Two Midterm Exam (40), Final Exam (40)																																																							

Course number: OPTO 263	Course title: Clinical Methods II																																									
Level/semester: level 5																																										
Credit hours:	Thereof lecture hours: 1 hour																																									
	Thereof practical hours: 2 hours (1 hour = 2 practical hours)																																									
Language: English																																										
Aims and goals/ skills of the course:	<p>Aims:</p> <ul style="list-style-type: none"> - To perform specific examination techniques essential for optometry practice. - To perform essential visual examination techniques combined their theoretical knowledge. <p>Skills:</p> <ul style="list-style-type: none"> - How to communicate with patients, instructors, and clinical staff. - How to deliver information to patients in a professional way. - Teach students how to deal with different patients' personalities and attitudes. 																																									
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Course number: OPTO 271		Course title: visual science I																																			
Level/semester: Level 4																																					
Credit hours:		Thereof lecture hours: 2 hours																																			
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Language: English																																					
Aims and goals/ skills of the course:		<p>Upon completion of this course, the student should be able to:</p> <ul style="list-style-type: none"> - Light as an electromagnetic radiation - Photometry, Inverse square law and cosine law, - Reflectance, Absorption and Optical density, - Visible spectrum as dictated by optical media characteristics. - Functional differences between rods and cones, - Retinal distribution light interaction with rods and cones. - The basis of photopic and scotopic vision, Types of visual acuity <p>Skills</p> <p>a- Cognitive skills to be developed</p> <ul style="list-style-type: none"> - Critical thinking - Problem solving - Judgment call <p>b- Knowledge skills</p> <ul style="list-style-type: none"> - This course will provide the student with the knowledge and practical application to be able to solve optical problems in experimental and clinical settings, regarding the behavior, management, and manipulation of light, magnification and image formation. 																																			
Content of the course:		<table border="1"> <thead> <tr> <th>Brief Outlines</th> <th>Week #</th> </tr> </thead> <tbody> <tr> <td>Origin of Light: Theories of Light; Electromagnetic wave concept (spectrum, energies)</td> <td>Week 1</td> </tr> <tr> <td>Photometry (1): Ophthalmic standard units; Illumination; inverse-square law; Luminance</td> <td>Week 2</td> </tr> <tr> <td>Photometry (2) : Retinal illumination; Luminance; some brain teaser!</td> <td>Week 3</td> </tr> <tr> <td>Visual acuity, VA (1): Resolving of the eye; Different types of VA</td> <td>Week 4</td> </tr> <tr> <td>Visual acuity, VA (2): Different types of VA (cont.); Factors affecting visual acuity</td> <td>Week 5</td> </tr> <tr> <td>Absorptance and Transmittance (1): reflectance; Transmittance; Absorptance; half-value thickness</td> <td>Week 6</td> </tr> <tr> <td>Mid –Term Exam 1</td> <td>Week 7</td> </tr> <tr> <td>Absorptance and Transmittance (2): half-value thickness (problems); Absorption of other radiations + problems</td> <td>Week 8</td> </tr> <tr> <td>Absorptance and Transmittance (3): Density Spectra; Optical density; Electromagnetic Radiation and the Eye</td> <td>Week 9</td> </tr> <tr> <td>Absorptance and Transmittance (4): Classification of Radiation Effects; Absorption of radiation by ocular tissues</td> <td>Week 10</td> </tr> <tr> <td>Absorptance and Transmittance (5): Effects of ultraviolet radiations</td> <td>Week 11</td> </tr> <tr> <td>Functional differences between rods and cones: their retinal distribution</td> <td>Week12</td> </tr> <tr> <td>Mid –Term Exam 2</td> <td>Week 13</td> </tr> <tr> <td>The basis of scotopic and photopic vision</td> <td>Week 14</td> </tr> <tr> <td>Quick revision for Final Exam preparation</td> <td>Week 15</td> </tr> <tr> <td>Final Exam</td> <td>Week 16</td> </tr> </tbody> </table>		Brief Outlines	Week #	Origin of Light: Theories of Light; Electromagnetic wave concept (spectrum, energies)	Week 1	Photometry (1): Ophthalmic standard units; Illumination; inverse-square law; Luminance	Week 2	Photometry (2) : Retinal illumination; Luminance; some brain teaser!	Week 3	Visual acuity, VA (1): Resolving of the eye; Different types of VA	Week 4	Visual acuity, VA (2): Different types of VA (cont.); Factors affecting visual acuity	Week 5	Absorptance and Transmittance (1): reflectance; Transmittance; Absorptance; half-value thickness	Week 6	Mid –Term Exam 1	Week 7	Absorptance and Transmittance (2): half-value thickness (problems); Absorption of other radiations + problems	Week 8	Absorptance and Transmittance (3): Density Spectra; Optical density; Electromagnetic Radiation and the Eye	Week 9	Absorptance and Transmittance (4): Classification of Radiation Effects; Absorption of radiation by ocular tissues	Week 10	Absorptance and Transmittance (5): Effects of ultraviolet radiations	Week 11	Functional differences between rods and cones: their retinal distribution	Week12	Mid –Term Exam 2	Week 13	The basis of scotopic and photopic vision	Week 14	Quick revision for Final Exam preparation	Week 15	Final Exam	Week 16
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Examination:		<i>two midterm exam (40%) + final exam (40%) + class work (5%) + practical exam (15%)</i>																																			

Course number: OPTO 272	Course title: Visual Science II																																			
Level/semester: Level 5																																				
Credit hours:	The # of lecture hours: 1 hours/week																																			
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Aims and goals/ skills of the course:	<p>Upon completion of this course, the student should be able to:</p> <ul style="list-style-type: none"> • Name the theories of light and define terminology relating to the behavior of light • Describe the behavior of light when it enters the eye • Understand light and its role in vision. • Understand the concept of threshold- frequency of seeing curve (adjustment method), sensitivity, • Define the Spatial phenomena: (simultaneous contrast) • Understand the photochemistry and electro physiology and sensory aspects of vision: thresholds and adaptation • Understand the temporal phenomena: flicker, Talbot-Plateau law <p>Skills</p> <p>d- Knowledge</p> <ul style="list-style-type: none"> - This course will provide the student with the knowledge and practical application to be able to describe the behavior of light when it enters the eye. Define terminology relating to the optical properties of the eye <p>e- Cognitive</p> <ul style="list-style-type: none"> - Critical thinking - Problem solving - Judgment call 																																			
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Examination:	<i>Two midterm exam (40%), Final Written examination (40%), work class (5%), practical exam (15%)</i>																																			

Course number: OPTO 273	Course title: Visual Optics
Level/semester: Level 5	
Credit hours:	The # of lecture hours: 2 hours/week
	The # of practical hours: 0 hours/week
Language: English	
Aims and goals/ skills of the course:	<p>Upon completion of this course, the student should be able to:</p> <ul style="list-style-type: none"> • Name the theories of light and define terminology relating to the behavior of light • Describe the behavior of light when it enters the eye • Understand light and its role in vision. • Understand the eye as an optical system • Define the optics of the eye and the reduced schematic eye models • Understand the refractive components (cornea and lens), principal points, ocular axes, angles, far and near points and spectacle refraction • Identify emmetropia and ametropia (hyperopia, myopia and astigmatism) • Understand the retinal image size in uncorrected and corrected emmetropia • Understand of range of accommodation as applicable to the emmetropia, myope and hyperope <p>Skills</p> <p>f- Knowledge This Course will provide the student with the knowledge and practical application to be able to describe the behavior of light when it enters the eye. Define terminology relating to the optical properties of the eye, emmetropia and ametropia (hyperopia, myopia and astigmatism) as well as far point, near point, and range of accommodation as applicable to the emmetropia, myopia and hyperopia</p> <p>g- Cognitive</p> <ul style="list-style-type: none"> - Critical thinking - Problem solving - Judgment call

Content of the course:	TOPICS TO BE COVERED	No. of Weeks	Contact Hours
	Optics of the Eye: The reduced eye The optical components of the eye Axes of the eye Visual angle Transmission of the components of the eye	1	2
	Optics of the Eye: Axes of the eye Visual angle Transmission of the components of the eye	2	4
	Optics of the eye - the reduced schematic eye models	1	2
	Optics of the eye: - Emmetropia and ametropia -hyperopia, -myopia -astigmatism	2	4
	1 st Midterm exam	1	2
	Image Quality in the eye: Defocus and pupil size Depth of focus/field Diffraction and resolution Scatter Calculation and measurement of wide angle scatter	2	4
	Treatments: -hyperopia, -myopia -astigmatism	3	6
	2 nd Midterm exam	1	2
	Range of accommodation: Far point & near point of accommodation	1	2
	Final exam	1	2
	Examination:	<i>Two midterm exam (40%), Final Written examination (40%), work class (5%), Purposal (15%)</i>	

Course number: OPTO 292	Course title: Introduction to Optometry																																			
Level/semester: Level 4																																				
Credit hours:	The # of lecture hours: 2 hours/week																																			
	The # of practical hours: None																																			
Language: English																																				
Aims and goals/ skills of the course:	<p><i>The students are expected to be familiarized with the history of optometry, characteristics of professions, inter-professional relations, scope and status of optometry services, organizations and ethical considerations of patient care.</i></p> <p><i>Fundamental optometric terminology and basic procedures will also be introduced.</i></p> <p><i>Brief introduction of the eye and types of refractive error: myopia, hyperopia and astigmatism and their causes and correction.</i></p> <p><i>Introduction about the low vision devices, the ophthalmic equipment and their use in eye examination will also be discussed</i></p> <p><i>To better appreciate the values and worth of the optometry profession and the enviable opportunities and services it provides.</i></p>																																			
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Examination:	<p><i>Two midterm exam (40%), Final Written examination (40%), work class (5%), purposal (15%)</i></p>																																			

Course number: OPTO 343	Course title: : Ocular Drugs & Pharmacology																																									
Level/semester: Level 6																																										
Credit hours:	The # of lecture hours: 2 hours/week																																									
	The # of practical hours: 0 hours/week																																									
Language: English																																										
Aims and goals/ skills of the course:	<ul style="list-style-type: none"> • Focusing the attention to pharmacology as the science of drug action and introduce fundamental ideas and major concepts in pharmacology • Be familiar with the pharmacology of ocular autonomic drugs with special regard on therapeutic uses, adverse effects and contraindications • Outline the rationale for the use of medications in the management of ocular infections, allergies, pain, inflammation , elevated intra ocular pressure and age-related macular degeneration. • Understand the use of diagnostic drugs to facilitate an eye examination as well as the use of therapeutic drugs with special regard on their ocular complications • To be familiar with pre- and post operative drugs used in ophthalmic surgery • To focus the attention to drugs which induce ocular adverse reactions as a side effect of their systemic use 																																									
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Course number: OPTO 344	Course title: OCULAR DISEASE I																																						
Level/semester: Level 7																																							
Credit hours:	The # of lecture hours: 2 hours/week																																						
	The # of practical hours: 0 hours/week																																						
Language: English																																							
Aims and goals/ skills of the course:	<p>Aim: This class is the first of two course series designed to give undergraduate students an introduction to the diseases and injuries significant to an optometrist. Included in this discussion would be pertinence of patient's history and prompt and appropriate referral. Basic disease processes, diagnosis, therapy and prognosis for: ocular trauma and burns, diseases of the eyelids and lacrimal system, orbital disorders; uveal, corneal and external diseases will also be studied.</p> <p>Skills</p> <p>h- Knowledge Students should know the pathology of different disease processes, etiologies, symptoms and signs, investigations required, differential diagnosis, plan of treatment, medications and surgical ideas.</p> <p>i- Cognitive</p> <ol style="list-style-type: none"> 1- Critical thinking and collation of information 2- Problem solving 3- Decision making 																																						
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Orbital diseases	1	2																																					
Final examination	1	2																																					
Examination:	<i>Two midterm exam (40%), Final Written examination (40%), Class work (5%) Short Essay (15%)</i>																																						

Course number: OPTO 345	Course title: OCULAR DISEASE II																																									
Level/semester: Level 7																																										
Credit hours:	The # of lecture hours: 2 hours/week																																									
	The # of practical hours: 0 hours/week																																									
Language: English																																										
Aims and goals/ skills of the course:	<p>Aim:</p> <ol style="list-style-type: none"> 1. To know how to diagnose serious problems threatening vision. 2. To know how to correlate different ophthalmic investigations with ocular diseases. 3. To know how to manage ophthalmic problems. <p>Skills</p> <p>j- Knowledge</p> <ol style="list-style-type: none"> 1- Primary diagnosis of ocular disease 2- Correlation of diseases with investigation which student is exposed to 3- Initial treatment and prevention <p>k- Cognitive</p> <ol style="list-style-type: none"> 1- Critical thinking 2- Problem solving 3- How to present and manage ocular diseases 																																									
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Course number: OPTO 353		Course title: Ophthalmic Optics II																																					
Level/semester: Level 6																																							
Credit hours:		The # of lecture hours: 1 hours/week																																					
		The # of practical hours: 1 hours/week																																					
Language: English																																							
Aims and goals/ skills of the course:		<p>Upon completion of this course, the student should be able to:</p> <ul style="list-style-type: none"> • Define optical center • Understand Prismatic effect of decentration, and oblique prismatic effect, • Identify the direction of prismatic effect given the lens power, the OCD, and the PD. • Calculate the amount of induced prism given the lens power and the amount of decentration. • Calculate the decentration given the PD and the OCD • Understand Prismatic effect of cylindrical lenses, • Define the optics of the eye and the reduced schematic eye models • Understand Lens decentration. Decentration of spherocylindrical lenses, • Identify modern lens design, • Bifocal lenses, Characteristics and selection criteria, • Cosmetic consideration of lenses, <p>Skills</p> <p>l- Knowledge This Course will provide the student with the knowledge and practical application to be able to describe and define lens base curve and ocular curve. Calculate the base curve given the ocular curve and the lens power or visa versa as well as describing how the base curve is measured and how to calculate the decentration given the PD and the OCD</p> <p>m- Cognitive</p> <ul style="list-style-type: none"> - Critical thinking - Problem solving - Judgment call 																																					
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Examination:		<p><i>Two midterm exam (40%), Final Written examination (40%), work class (5%), Practical exam(15%)</i></p>																																					

Course number: OPTO 354	Course title: : Contact Lenses I																																									
Level/semester:	level 6																																									
Credit hours:	Thereof lecture hours: 1 hour																																									
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Language: English																																										
Aims and goals/ skills of the course:	<p><i>Aims:</i></p> <ul style="list-style-type: none"> - To teach the student history, development, contact lens material and fitting and evaluation of soft contact lens. - Student should improve his/ her skill to perform soft contact lens examination techniques. <p><i>Skills:</i></p> <ul style="list-style-type: none"> - How to communicate with patients, instructors, and clinical staff. - How to deliver information to patients in a professional way. - Teach students how to deal with different patients' personalities and attitudes 																																									
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Course number: OPTO 355	Course title: Contact Lenses II																																												
Level/semester: Level 7																																													
Credit hours:	The # of lecture hours: 2 hours/week																																												
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Aims and goals/ skills of the course:	<p>Aims To teach the student history, development, hard contact lens material and fitting and evaluation of hard contact lens.</p> <p>Skills</p> <p>a- Knowledge Student should improve her skill to perform soft contact lens examination techniques.</p> <p>b- Cognitive</p> <ul style="list-style-type: none"> - Critical thinking - solving problems - Judgment call 																																												
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Course number: OPTO 356		Course title: Physical Optics																																			
Level/semester: Level 6																																					
Credit hours:		Thereof lecture hours: 2 hours																																			
		Thereof practical hours: 0 hour																																			
Language: English																																					
Aims and goals/ skills of the course:		<p>Upon completion of this course, the student should be able to:</p> <ul style="list-style-type: none"> • Develop a basic understanding of optics and imaging • Understand light as an electromagnetic wave, • Understand light at an interface, polarization, interference, and diffraction, • Understand modern optics and a discussion of the fundamental limitations of an optical system and its effect on images • Understand holography, chromatic aberration and achromatic lenses, • Understand spectroscopy and lasers. <p>Skills</p> <p>a- Cognitive skills to be developed</p> <ul style="list-style-type: none"> - Critical thinking - Problem solving - Judgment call <p>b- Knowledge skills</p> <ul style="list-style-type: none"> - this course will provide the student with the knowledge and practical application to be able to describe and define 																																			
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Examination:		<i>e.g. written examination, presentation two midterm exam (40%) + final exam (40%) + class work (10%) + project report (10%)</i>																																			

Course number: OPTO 363	Course title: Clinical Methods III																																			
Level/semester: Level 6																																				
Credit hours:	The # of lecture hours: 1 hours/week																																			
	The # of practical hours: 2 hours/week																																			
Language: English																																				
Aims and goals/ skills of the course:	<p>Upon completion of this course, the student should be able to perform additional refraction examination techniques including:</p> <ul style="list-style-type: none"> - monocular subjective refraction, - use of the JCC, - accommodative amplitude measurements, - phorias, vergences and determination of ADD. <p>Skills</p> <ul style="list-style-type: none"> n- Knowledge This Course will provide the student with the knowledge and practical application to be able to perform the requirements clinical examination related to the topics discussed in this course such as monocular and binocular subjective refraction examination o- Cognitive <ul style="list-style-type: none"> - Critical thinking - Problem solving - Judgment call 																																			
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Course number: OPTO 364	Course title: : Clinical Methods IV																																
Level/semester: Level 7																																	
Credit hours:	The # of lecture hours: 1 hours/week																																
	The # of practical hours: 2 hours/week																																
Language: English																																	
Aims and goals/ skills of the course:	<p>By the end of this course the student should know when and how to carry out the following tests and how to interpret the results from the tests:</p> <ul style="list-style-type: none"> i) Binocular Subjective Refraction (as distinct from Monocular Subjective) ii) Cycloplegic Refraction iii) Biomicroscopic Examination of the Posterior Segment iv) Tonometry v) Indirect Ophthalmoscopy <p>Skills:</p> <p>a- Knowledge When to use, how to administer and how to interpret the results of the following techniques:</p> <ul style="list-style-type: none"> i) Binocular Subjective Refraction (as distinct from Monocular Subjective) ii) Cycloplegic Refraction iii) Biomicroscopic Examination of the Posterior Segment iv) Tonometry v) Indirect Ophthalmoscopy <p>b- Cognitive The logical selection of appropriate tests and the interpretation of tests results as regards particular patients.</p>																																
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Course number: OPTO 365	Course title: : Advanced Techniques																																			
Level/semester: Level 7																																				
Credit hours:	The # of lecture hours: 1 hours/week																																			
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Language: English																																				
Aims and goals/ skills of the course:	<p>By the end of this course the student should know when and how to carry out the following tests and how to interpret the results from the tests. In addition they will learn to collate the results of an eye examination and come up with a diagnosis and a therapeutic plan.</p> <ul style="list-style-type: none"> vi) Lacrimal studies - TBUT and Schirmer test vii) Perimetry – Confrontation fields, Tangent Screen, Quantitative Perimetry viii) Macular function tests - Photostress and Amsler grid ix) Anterior segment and fundus photography x) Correlation of visual complaints with relevant optometric tests xi) Collation of eye examination results xii) Diagnosis and therapy <p>Skills:</p> <ul style="list-style-type: none"> c- Knowledge <p>The student should learn how to match signs and symptoms with relevant tests, differential diagnosis, how to collate test results to come up with an appropriate diagnosis and therapeutic plan.</p> <ul style="list-style-type: none"> vi) Lacrimal studies - TBUT and Schirmer test vii) Perimetry – Confrontation fields, Tangent Screen, Quantitative Perimetry viii) Macular function tests - Photostress and Amsler grid ix) Anterior segment and fundus photography <ul style="list-style-type: none"> d- Cognitive <p>The logical selection of appropriate tests and the interpretation of tests results as regards particular patients.</p>																																			
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Course number: Opto 371	Course title: Statistical Optometry																																														
Level/semester: Level 6																																															
Credit hours:	The # of lecture hours: 2 hours/week																																														
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Aims and goals/ skills of the course:	<ol style="list-style-type: none"> 1. Introduction of research techniques and Methods 2. Enrich student's knowledge in all steps leading to a good research 3. Writing and reporting of research results 4. Health Sciences Research ethics 5. Types of scientific research 																																														
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Course number: OPTO 374		Course title: Binocular Vision																																		
Level/semester: Level 6																																				
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Aims and goals/ skills of the course:		<p>This class will provide the student with the knowledge and experience specific to BSV so that the student will show the following understanding and abilities:</p> <ul style="list-style-type: none"> • Knowledge of the concept of the BSV. • Knowledge of the prerequisite to develop normal BSV • The ability to select and administrate diagnostic tools to evaluate BSV status and identify anomalies in a patient scenario. • The ability to selects an alternate method to diagnose and evaluate BSV and identify anomalies in a patient scenario. • The ability to determine the appropriate sequence and application of tests for sensory and motor evaluation, based on the findings of ophthalmic examination. <p>Skills</p> <p>p- Knowledge This Course will provide the student with the knowledge of the Binocular Single Vision aspects and the clinical assessment of patient, with emphasis on the standard clinical procedures.</p> <p>q- Cognitive</p> <ul style="list-style-type: none"> - Critical thinking - Problem solving - Judgment call 																																		
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Course number: OPTO 375		Course title: Anomalies of Binocular Vision																																					
Level/semester: Level 7																																							
Credit hours:	The # of lecture hours: 1 hours/week																																						
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Language: English																																							
Aims and goals/ skills of the course:	<p>This class will introduce the student to the complexities of analysis of the anomalies of BSV system. This will be achieved through clinical scenarios in which the student will be required to engage in direct patient care, including sensory visual evaluation, motor visual evaluation. This class is a prerequisite for OPTO 493 Orthoptics</p> <p>This course will provide the student with the knowledge and experience specific to BSV so that the student will show the following understanding and abilities:</p> <ul style="list-style-type: none"> • Knowledge of the concept of the complexities of analysis of the anomalies of BSV system • The ability to select and administrate diagnostic tools to evaluate BSV status and identify anomalies in a patient scenario. • The ability to selects an alternate method to diagnose and evaluate BSV and identify anomalies in a patient scenario. • The ability to determine the appropriate sequence and application of tests for sensory and motor evaluation, based on the findings of ophthalmic examination. <p>r- Knowledge This Course will provide the student with the knowledge about the anomalies of the Binocular Single Vision aspects and the ability to select and administrate diagnostic tools to evaluate binocular status and identify anomalies of patient binocular vision system, with emphasis on the standard clinical procedures.</p> <p>s- Cognitive</p> <ul style="list-style-type: none"> - Critical thinking - Problem solving - Judgment call 																																						
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Course number: OPTO 377		Course title: Visual Science III																																								
Level/semester: Level 7																																										
Credit hours:		The # of lecture hours: 2 hours/week																																								
		The # of practical hours: 0 hours/week																																								
Language: English																																										
Aims and goals/ skills of the course:		<p>Upon completion of this course, the student should be able to understand : Monocular perception of depth, monocular cues such as relative sizes and perspective Stereoscopic perception of depth, retinal correspondence, Veith-Muller horopter, Panum's areas. Psychophysical testing of dept perception and physiology of stereopsis, perception of motion, motion thresholds and illusions, measurement of motion, motion mechanisms, colour vision advanced techniques, ERG's, VEP's etc</p> <p>Skills</p> <p>t- Knowledge This Course will provide the student with the knowledge about the Monocular perception of depth, monocular cues retinal correspondence, contrast sensitivity channels and measurements, physiology of visual fields and techniques of measurements, scotomas, thresholds. As well as the psychophysical testing of dept perception, colour vision advanced techniques, such as ERG's, VEP's etc</p> <p>u- Cognitive - Critical thinking - Problem solving - Judgment call</p>																																								
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Course number: OPTO 394	Course title: Geriatric Optometry																																						
Level/semester: Level 7																																							
Credit hours:	The # of lecture hours: 1 hours/week																																						
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Language: English																																							
Aims and goals/ skills of the course:	<p>Aims introduce optometry students to problems unique to the geriatric population</p> <p>Skills</p> <ul style="list-style-type: none"> a- Knowledge Student should learn about the unique problems to the geriatric population. b- Cognitive <ul style="list-style-type: none"> - Critical thinking - Judgment call 																																						
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	Factors affecting them and possible solutions.	2	2																																				
	The impact of elderly to visual impairment,	2	2																																				
	The psychological adaptation	2	2																																				
	second Midterm Exam	1	2																																				
	The situations of psychological disorders	2	2																																				
	Clinical practice	13	19																																				
	Final examination	1	2																																				
Examination:	<i>Two midterm exam (40%), Final Written examination (40%), Clinical exam (20%)</i>																																						

Course number: OPTO 456		Course title : Contact Lenses III																																											
Level/semester: Level 8																																													
Credit hours:	The # of lecture hours: 1 hours/week																																												
	The # of practical hours: 1 hours/week																																												
Language: English																																													
Aims and goals/ skills of the course:	<p>Aim:</p> <ol style="list-style-type: none"> 3. Fitting and management of Toric and Bifocal contact lenses. 4. Fitting contact lenses for keratoconus and aphakia patients. 5. Fitting contact lenses for children patients. 6. Understanding and treatment of contact lens complication. <p>Skills:</p> <p>e- Knowledge</p> <ol style="list-style-type: none"> 1- Fitting Toric contact lenses for astigmatic patient. 2- Physiology of the cornea in relation to oxygen supply and transparency 3- Definition and management of Keratoconus 4- Fitting Bifocal and aphakic Contact lenses. 5- Using contact lenses for other specialty cases. 6- Understanding and management of contact lens complications 7- Ability for Student presentation <p>f- Cognitive</p> <ul style="list-style-type: none"> - Critical thinking - Problem solving - How to present and manage contact lens complications. 																																												
Content of the course:	<table border="1"> <thead> <tr> <th>1. TOPICS to be COVERED</th> <th>No. of Weeks</th> <th>Contact Hours</th> </tr> </thead> <tbody> <tr> <td>Toric contact lenses</td> <td>3</td> <td>3</td> </tr> <tr> <td>Anatomy of cornea and Oxygen supply</td> <td>1</td> <td>1</td> </tr> <tr> <td>Keratoconus</td> <td>2</td> <td>2</td> </tr> <tr> <td>Bifocal Contact lenses</td> <td>1</td> <td>1</td> </tr> <tr> <td>First Midterm Exam</td> <td>1</td> <td>1</td> </tr> <tr> <td>Contact lens for Aphakia</td> <td>1</td> <td>1</td> </tr> <tr> <td>Contact lens for pediatrics</td> <td>1</td> <td>1</td> </tr> <tr> <td>Contact lens complication. Students' presentations</td> <td>3</td> <td>3</td> </tr> <tr> <td>second Midterm Exam</td> <td>1</td> <td>1</td> </tr> <tr> <td>Other specialty contact lens applications</td> <td>1</td> <td>1</td> </tr> <tr> <td>Clinical practice</td> <td>13</td> <td>19</td> </tr> <tr> <td>Clinical Examination</td> <td>1</td> <td>2</td> </tr> <tr> <td>Final examination</td> <td>1</td> <td>2</td> </tr> </tbody> </table>			1. TOPICS to be COVERED	No. of Weeks	Contact Hours	Toric contact lenses	3	3	Anatomy of cornea and Oxygen supply	1	1	Keratoconus	2	2	Bifocal Contact lenses	1	1	First Midterm Exam	1	1	Contact lens for Aphakia	1	1	Contact lens for pediatrics	1	1	Contact lens complication. Students' presentations	3	3	second Midterm Exam	1	1	Other specialty contact lens applications	1	1	Clinical practice	13	19	Clinical Examination	1	2	Final examination	1	2
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Final examination	1	2																																											
Examination:	<i>Two midterm exam (40%), Final Written examination (40%), Class work (5%) clinical Exam (15%)</i>																																												

Course number: OPTO 466	Course title: Optometry Clinic I														
Level/semester: Level 8															
Credit hours:	The # of lecture hours: 0 hours/week														
	The # of practical hours: 3 hours/week (1 hour = 2 practical hours)														
Language: English															
Aims and goals/ skills of the course:	<p>Aims Optometry students will examine patients and provide refractive care. Under the supervision of faculty optometrists, students will learn to draw upon the information and skills acquired in prior classes to solve visual problems.</p> <p>Skills</p> <ul style="list-style-type: none"> a- Knowledge Student will learn to draw upon the information and skills acquired in prior classes to solve visual problems. b- Cognitive <ul style="list-style-type: none"> - Critical thinking - Judgment call 														
Content of the course:	<table border="1"> <thead> <tr> <th>TOPICS TO BE COVERED</th> <th>No. of Weeks</th> <th>Contact Hours</th> </tr> </thead> <tbody> <tr> <td>Optometry students will examine patients and provide refractive care. Under the supervision of faculty optometrists, students will learn to draw upon the information and skills acquired in prior classes to solve visual problems. Additionally, patient management skills will be discussed and developed.</td> <td>13</td> <td>78</td> </tr> <tr> <td>Clinical Examination</td> <td>1</td> <td>6</td> </tr> <tr> <td>Final examination</td> <td>1</td> <td>3</td> </tr> </tbody> </table>			TOPICS TO BE COVERED	No. of Weeks	Contact Hours	Optometry students will examine patients and provide refractive care. Under the supervision of faculty optometrists, students will learn to draw upon the information and skills acquired in prior classes to solve visual problems. Additionally, patient management skills will be discussed and developed.	13	78	Clinical Examination	1	6	Final examination	1	3
	TOPICS TO BE COVERED	No. of Weeks	Contact Hours												
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	Clinical Examination	1	6												
Final examination	1	3													
Examination:															
<i>Clinical midterm exam (40%), Final clinical exam (40%), weekly case check Assignment (20%)</i>															

Course number: OPTO 469	Course title: Optometry Clinic II											
Level/semester: Level 7												
Credit hours:	The # of lecture hours: 0 hours/week											
	The # of practical hours: 4 hours/week (1 hour = 2 practical hours)											
Language: English												
Aims and goals/ skills of the course:	<p>Under the supervision of faculty optometrist, optometry students will examine patients and provide refractive care, students will learn to draw upon the information and skills acquired in prior classes to solve visual problems. Additionally, patient management skills, record keeping, patient management, patient communications and managing an office staff, patient education, professional standards, and proposals for services and equipment will also be practice in order to acquire more competence.</p> <p>Skills</p> <p>a- Knowledge Students will practice by examining more patients in order to acquire more competence. They will learn to be independent in their clinical decision drawing upon the information and skills acquired in prior classes to solve visual problems. Additionally, patient management skills, record keeping, patient communications, managing an office staff, patient education, professional standards will also be improved by this clinical practice</p> <p>b- Cognitive - Critical thinking - Judgment call</p>											
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TOPICS TO BE COVERED	No. of Weeks	Contact Hours										
Clinical practice / Optometry clinic at King Saud University Hospital	14	56										
Final exam	1	8										
Examination:	<i>Weekly clinical Assignment (20%), Final Written examination (60%), Weekly clinical evaluation (20%)</i>											

Course number: OPTO 475		Course title: Visual Science Project		
Level/semester: Level 9				
Credit hours:	The # of lecture hours: 0 hours/week			
	The # of practical hours: 4 hours/week (1 hour = 2 practical hours)			
Language: English				
Aims and goals/ skills of the course:	Aims To introduce the students to research projects. Under supervision, a project is proposed, conducted, written up and presented.			
	Skills a- Knowledge Student will learn to conduct research projects b- Cognitive - Critical thinking			
Content of the course:	TOPICS TO BE COVERED		No. of Weeks	Contact Hours
	To introduce the students to research projects. Under supervision, a project is proposed, conducted, written up and presented. It may be of any number of formats; however background research, methods, data collection, analysis, presentation and evaluation will be discussed.		13	39
	Dissertation		13	2
	Poster or power point Presentation		1	2
Examination:	Poster or power point Presentation (40%), Dissertation (60%)			

Course number: OPTO 491	Course title: Optometric Practices																																								
Level/semester: e.g. Level 8																																									
Credit hours:	Thereof lecture hours: 2 hours																																								
	Thereof practical hours:																																								
Language: English																																									
Aims and goals/ skills of the course:	<p>This course is designed to provide educational information and exercises that facilitate the acquisition of knowledge and skills necessary for entering independent practice.</p> <p>The desired outcome of the course is that the student will be able to select and enter the best practice situation to meet his/her personal goals upon graduation</p> <p>Assessment form will be distributed to students by the end of the course</p>																																								
Content of the course:	<table border="1"> <thead> <tr> <th>Topics to covered</th> <th>No. Of Weeks teaching</th> <th>Contact hours</th> </tr> </thead> <tbody> <tr> <td>Demographic</td> <td>2</td> <td>4</td> </tr> <tr> <td>Self- employment options</td> <td>1</td> <td>2</td> </tr> <tr> <td>Employment Options</td> <td>2</td> <td>4</td> </tr> <tr> <td>Mid term 1</td> <td>1</td> <td>2</td> </tr> <tr> <td>Starting A private Practice</td> <td>2</td> <td>4</td> </tr> <tr> <td>practice financing</td> <td>2</td> <td>4</td> </tr> <tr> <td>organizing an office</td> <td>2</td> <td>4</td> </tr> <tr> <td>Mid term 11</td> <td>1</td> <td>2</td> </tr> <tr> <td>managing office staff</td> <td>2</td> <td>4</td> </tr> <tr> <td>Recall System</td> <td>2</td> <td>4</td> </tr> <tr> <td>Review</td> <td>1</td> <td>2</td> </tr> <tr> <td>Final Exam</td> <td>1</td> <td>2</td> </tr> </tbody> </table>		Topics to covered	No. Of Weeks teaching	Contact hours	Demographic	2	4	Self- employment options	1	2	Employment Options	2	4	Mid term 1	1	2	Starting A private Practice	2	4	practice financing	2	4	organizing an office	2	4	Mid term 11	1	2	managing office staff	2	4	Recall System	2	4	Review	1	2	Final Exam	1	2
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Final Exam	1	2																																							
Examination	<i>two midterm exam (40%) + final exam (40%) + presentation (5%), Assessment(15%)</i>																																								

Course number: OPTO 492	Course title: Case analysis																																								
Level/semester: e.g. Level 8																																									
Credit hours:	Thereof lecture hours: 2 hours																																								
	Thereof practical hours:																																								
Language: English																																									
Aims and goals/ skills of the course:	<p>In this course, analysis of optometric cases will be discussed. Selected cases from optometry clinics will be written up and presented by the student in a concise and professional manner. In a seminar setting each case will be presented for discussion; incorporating the entering complaints, objective and subjective findings, analysis of data, diagnosis and planned course of therapy. The course also includes important subjects to be covered that are presented in an open discussion between the tutorial and the students, that should prepare it first then take home notes are given to the students. These subjects include Symptoms and signs of refractive errors, Causes of sudden loss of vision, , Headaches, Cycloplegic refraction, Presbyopia, Heterophoria and glasses prescription, Astigmatic prescription, prescription in childhood and infancy, refractive changes in some ocular diseases and after ocular operations, Problems of accommodation, Refractive error correction; surgical versus nonsurgical methods.</p>																																								
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Examination	<i>written case (30%), presentationof 2 cases (55%), Assessment(15%)</i>																																								

Course number: OPTO 493		Course title: Orthoptics																																																				
Level/semester: Level 8																																																						
Credit hours:		The # of lecture hours: 1 hours/week																																																				
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Language: English																																																						
Aims and goals/ skills of the course:		<p>Upon completion of this course, the optometry student should be able to:.</p> <ul style="list-style-type: none"> • Understand the abnormality and method of treatment for: strabismus, saccade, pursuit convergence, divergence and vergence range problems. • Understand The treatment of other visual and oculo-motor problems such as deficit of pursuit, saccades and eye-hand coordination • Perform treatment of binocular problems emanating from visual and oculo motor inefficiency • Think and act logically following standardized testing methods to provide the highest quality of patient care. • Identify testing procedures considered necessary for each orthoptic patient where the patient's age, mental, physical and emotional capability will permit such testing. <p>Skills</p> <p>v- Knowledge This Course will provide the student with the knowledge and practical application to be able to solve visual problems in experimental and clinical settings, regarding the binocular single vision misalignment and abnormalities, as well as the oculo-motor and vergence problems.</p> <p>w- Cognitive</p> <ul style="list-style-type: none"> - Critical thinking - Problem solving - Judgment call 																																																				
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Course number: OPTO 495	Course title: Low Vision																																									
Level/semester: Level 8																																										
Credit hours:	The # of lecture hours: 2 hours/week																																									
	The # of practical hours: 1 hours/week (1 hour = 2 practical hours)																																									
Language: English																																										
Aims and goals/ skills of the course:	<p>Upon completion of this course, the optometry student should be able to:.</p> <ul style="list-style-type: none"> • Understand the etiology, demography and clinical characteristics of low vision, • Understand the techniques of examination and the principles of diagnosis of low vision patient • Perform optometric therapy for low vision patient. • Master the clinical applications of magnification, and illumination control for low vision patient • Understand and perform enhancements method of visual field types and characteristics of low vision aids, • Understand the social and psychological considerations for the low vision patients • Understand multidisciplinary approaches to low vision patient rehabilitation. <p>Skills</p> <p>x- Knowledge This Course will provide the student with the knowledge and practical application to be able to apply the techniques of examination and diagnosis of low vision patient in experimental and clinical settings, as well as performing therapy and rehabilitation for low vision patient.</p> <p>y- Cognitive</p> <ul style="list-style-type: none"> - Critical thinking - Problem solving - Judgment call 																																									
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Course number: OPTO 496	Course title: Occupational Vision																																																										
Level/semester: e.g. Level 9																																																											
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Content of the course:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: left; padding: 5px;">1 Topics to be Covered</th> </tr> <tr> <th style="width: 65%; text-align: center; padding: 5px;">Topic</th> <th style="width: 15%; text-align: center; padding: 5px;">No of Weeks</th> <th colspan="2" style="width: 20%; text-align: center; padding: 5px;">Contact hours</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">1-Vision screening</td> <td style="text-align: center; padding: 5px;">1</td> <td colspan="2" style="text-align: center; padding: 5px;">2</td> </tr> <tr> <td style="padding: 5px;">2-Visual performance</td> <td style="text-align: center; padding: 5px;">1</td> <td colspan="2" style="text-align: center; padding: 5px;">2</td> </tr> <tr> <td style="padding: 5px;">3-Incidence of ocular injuries and their prevention</td> <td style="text-align: center; padding: 5px;">1</td> <td colspan="2" style="text-align: center; padding: 5px;">2</td> </tr> <tr> <td style="padding: 5px;">4- Construction of eye protectors</td> <td style="text-align: center; padding: 5px;">1</td> <td colspan="2" style="text-align: center; padding: 5px;">2</td> </tr> <tr> <td style="padding: 5px;">Mid term 1</td> <td style="text-align: center; padding: 5px;">1</td> <td colspan="2" style="text-align: center; padding: 5px;">2</td> </tr> <tr> <td style="padding: 5px;">5- Mechanical ocular injuries.</td> <td style="text-align: center; padding: 5px;">2</td> <td colspan="2" style="text-align: center; padding: 5px;">2</td> </tr> <tr> <td style="padding: 5px;">6-Non- mechanical ocular injuries.</td> <td style="text-align: center; padding: 5px;">1</td> <td colspan="2" style="text-align: center; padding: 5px;">2</td> </tr> <tr> <td style="padding: 5px;">7- Lamps and lighting</td> <td style="text-align: center; padding: 5px;">1</td> <td colspan="2" style="text-align: center; padding: 5px;">2</td> </tr> <tr> <td style="padding: 5px;">Mid term 11</td> <td style="text-align: center; padding: 5px;">1</td> <td colspan="2" style="text-align: center; padding: 5px;">2</td> </tr> <tr> <td style="padding: 5px;">8- Visual display unit</td> <td style="text-align: center; padding: 5px;">1</td> <td colspan="2" style="text-align: center; padding: 5px;">2</td> </tr> <tr> <td style="padding: 5px;">9- Driving</td> <td style="text-align: center; padding: 5px;">1</td> <td colspan="2" style="text-align: center; padding: 5px;">2</td> </tr> <tr> <td style="padding: 5px;">Final Exam</td> <td style="text-align: center; padding: 5px;">1</td> <td colspan="2" style="text-align: center; padding: 5px;">2</td> </tr> </tbody> </table>			1 Topics to be Covered				Topic	No of Weeks	Contact hours		1-Vision screening	1	2		2-Visual performance	1	2		3-Incidence of ocular injuries and their prevention	1	2		4- Construction of eye protectors	1	2		Mid term 1	1	2		5- Mechanical ocular injuries.	2	2		6-Non- mechanical ocular injuries.	1	2		7- Lamps and lighting	1	2		Mid term 11	1	2		8- Visual display unit	1	2		9- Driving	1	2		Final Exam	1	2	
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Course number: OPTO 497	Course title: Pediatric Optometry																																									
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Aims and goals/ skills of the course:	<p>Upon completion of this course, the student should be able to:</p> <ul style="list-style-type: none"> • Understand the developments of the eye and the child visual system • Select and administrate diagnostic tools to evaluate the child visual system and identify anomalies in a patient scenario. • Selects an alternate method to diagnose and evaluate the child visual system and identify anomalies in a patient scenario. • Determine the appropriate sequence and application of tests for sensory visual evaluation, based on the findings of ophthalmic examination. <p>Skills</p> <p>a- Cognitive skills to be developed</p> <ul style="list-style-type: none"> - Critical thinking - Problem solving - Judgment call <p>b- Knowledge skills</p> <ul style="list-style-type: none"> - this course will provide the student with the knowledge and practical application to be able to have a general recap of the visual pathway and the clinical assessment and management of the young patient (birth through preschool) with emphasis on the modification of standard clinical procedures to accommodate the very young patient as well as how the development of various visual functions impacts treatment and management decisions. 																																									
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