

University: Al Azhar
Faculty: Medicine
Department: Ophthalmology

Course Specification

1. Course Data		
Course Code : 07-700-Ophth-DP	Course Title: Physiology	Academic Year / level: 1 st part diploma Ophthalmology
Specialization:	No. of Instructional Units:	
	Lecture	4hr/wk
	Practical	4
	Seminar 1hr/wk	

2. Course Aim	<p>The aim of the course is to provide the postgraduate with the advanced knowledge and understanding of the physiology of the eye and related structures through providing:</p> <ul style="list-style-type: none"> • The knowledge and understanding of physiology of the Visual perception and its Processing, Ocular Circulation and Binocular Vision. • Ability to correlate alteration of the physiological function to the different ophthalmic problems.
3. Intended Learning Outcome (ILOs)	
a. Knowledge and Understanding:	<p>At the end of the course, the students should be able to:</p> <p>A1. Recognize physiological process in the eye and its implication on vision.</p> <p>A2. Recognize visual pathway.</p> <p>A3. Describe physiology of color vision.</p> <p>A4. Describe physiology of accommodation.</p> <p>A5. Recognize basics of electrophysiological tests needed for the diagnosis of ophthalmic diseases.</p>
b. Intellectual Skills:	<p>At the end of the course; the student should be able to:</p> <p>B1. Determine, analyze and prioritize the basic physiology of every part of the eye.</p> <p>B2. Interpret, analyze, and evaluate information objectively, recognizing its limitations.</p> <p>B3. Integrate the results of electro-physiological investigational findings into a meaningful diagnostic formulation.</p>

c. Professional Skills:	At the end of the course; the students should be able to: C1. Demonstrate basic sciences practical skills relevant to future practice. C2. Examine the field of vision manually or mechanically and interpret perimetric examination of the eye.																																																																				
d. General Skills:	At the end of the course ; the students should be able to: D1. Use information and communication technology effectively. D2. Retrieve, manage, and manipulate information by all means, including electronic means. D3. Present information clearly in written, electronic and oral for																																																																				
4. Course Content	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:70%;">Topics</th> <th style="width:15%;">Lectures</th> <th style="width:15%;">Clinical</th> </tr> </thead> <tbody> <tr><td>Physiology of eyelid</td><td></td><td></td></tr> <tr><td>Physiology of lacrimal system</td><td></td><td></td></tr> <tr><td>cornea</td><td></td><td></td></tr> <tr><td>Aqueous humor formation & outflow</td><td></td><td></td></tr> <tr><td>Intraocular pressure</td><td></td><td></td></tr> <tr><td>pupil</td><td></td><td></td></tr> <tr><td>Ceystalline lens</td><td></td><td></td></tr> <tr><td>Accommodation&presbyopia</td><td></td><td></td></tr> <tr><td>Ocular circulation</td><td></td><td></td></tr> <tr><td>Visual acuity</td><td></td><td></td></tr> <tr><td>photochemistry</td><td></td><td></td></tr> <tr><td>The vitreous</td><td></td><td></td></tr> <tr><td>The retina</td><td></td><td></td></tr> <tr><td>The optic nerve</td><td></td><td></td></tr> <tr><td>Electrophysiology of the eye</td><td></td><td></td></tr> <tr><td>Colour vision</td><td></td><td></td></tr> <tr><td>Visual field</td><td></td><td></td></tr> <tr><td>Modern perimetric techniques</td><td></td><td></td></tr> <tr><td>Extra-ocular muscles</td><td></td><td></td></tr> <tr><td>Binocular Vision</td><td></td><td></td></tr> <tr><td>Entoptic phenomena</td><td></td><td></td></tr> </tbody> </table>			Topics	Lectures	Clinical	Physiology of eyelid			Physiology of lacrimal system			cornea			Aqueous humor formation & outflow			Intraocular pressure			pupil			Ceystalline lens			Accommodation&presbyopia			Ocular circulation			Visual acuity			photochemistry			The vitreous			The retina			The optic nerve			Electrophysiology of the eye			Colour vision			Visual field			Modern perimetric techniques			Extra-ocular muscles			Binocular Vision			Entoptic phenomena		
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5. Teaching and Learning Methods	<ul style="list-style-type: none"> • Lectures and tutorials. • Practical. 																																																																				
6. Teaching and Learning Methods for Students with Special Needs	Not applicable																																																																				
7. Student Assessment:																																																																					
a. Procedures used:	<ul style="list-style-type: none"> • Final written exam. • Final oral exam. 																																																																				
b. Schedule:	At April/September after passing the written exam.																																																																				

c. Weighing of Assessment:	<ul style="list-style-type: none"> • Final written exam: 50 degrees. • Final oral exam: 50 degrees.
8. List of Textbooks and References:	
a. Course Notes	Lectures notes
b. Required Books (Textbooks)	<ul style="list-style-type: none"> • Adler's Physiology of the eye.
c. Recommended Books	<ul style="list-style-type: none"> • Adler's Physiology of the eye. Levin LA, Nilsson SFE, Ver Hoeve J, Wu SM (eds). Adler's physiology of the eye, 11 th ed. Edinburgh, London: Elsevier Inc. 2011 <ul style="list-style-type: none"> • www.elsevier.com/permissions
d. Periodicals, Web Sites, ..., etc.	<ul style="list-style-type: none"> • British journal ophthalmology: http://www.BJO.com • Ophthalmology. • American journal ophthalmology. • Achieve Ophthalmology. • Egyptian journal ophthalmology: http://www.eos1902.com • http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1755-3768 • http://ophthalmology.blogspot.com/ • http://pubmed.com

Course Instructor:

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Head of Department:

Prof. Dr. .

Date: 1/11/2014