

**University:** Al Azhar  
**Faculty :** Medicine  
**Department:** Ophthalmology

## Course Specification

<b>1. Course Data</b>		
<b>Course Code :</b> 07-700-Ophth-Ms	<b>Course Title:</b> Physiology	<b>Academic Year / level:</b> MD Ophthalmology
<b>Specialization:</b>	<b>No. of Instructional Units:</b>	
	<b>Lecture</b>	1.5hr/wk
	<b>Practical</b>	
	<b>Seminar 1hr/wk</b>	

<b>2. Course Aim</b>	<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"> <li>The knowledge and understanding of physiology of the Visual perception and its Processing, Ocular Circulation and Binocular Vision.</li> <li>Ability to correlate alteration of the physiological function to the different ophthalmic problems.</li> </ul>
<b>3. Intended Learning Outcome (ILOs)</b>	
<b>a. Knowledge and Understanding:</b>	<p><b>At the end of the course, the students should be able to:</b></p> <p>A1. Recognize physiological knowledge relevant to ophthalmic diseases.</p> <p>A2. Recognize physiological knowledge relevant to neuro-ophthalmic diseases.</p> <p>A3. Explain altered structure and function of the eye that is seen in various diseases and integrate it in clinical conditions.</p> <p>A4. Recognize basics of electrophysiological tests needed for the diagnosis of ophthalmic diseases.</p>
<b>b. Intellectual Skills:</b>	<p><b>At the end of the course; the student should be able to:</b></p> <p>B1. Integrate basic bio-physiological science with clinical case.</p> <p>B2. Recognize, define and prioritize problems on the basis of altered physiological function.</p> <p>B3. Interpret, analyze, and evaluate information objectively, recognizing its limitations.</p>

	B4.Integrate the results of electro-physiological investigational findings into a meaningful diagnostic formulation.		
<b>c. Professional Skills:</b>	<b>At the end of the course; the students should be able to:</b> C1.Demonstrate basic sciences practical skills relevant to future practice. C2.Perform and interpret perimetric examination of the eye. C3.Evaluate and interpret electrophysiological tests of the eye.		
<b>d. General Skills:</b>	<b>At the end of the course ; the students should be able to:</b> 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 forms. D4.Communicate ideas and arguments effectively.		
<b>4. Course Content</b>	<b>Topics</b>	<b>Lectures</b>	<b>Clinical</b>
	Focusing of an image on the retina	1	0
	Physiology of optical media	1	0
	Direction of gaze	1	0
	Ocular Circulation	1	0
	Protection of the eye	1	0
	Photoreception	1	0
	Visual processing in the retina	1	0
	Visual processing in the brain	1	0
	Visual perception	1	0
	Development of Vision in Infancy	1	0
	Binocular Vision	2	0
<b>5. Teaching and Learning Methods</b>	<ul style="list-style-type: none"> <li>• Lectures and tutorials.</li> <li>• Workshops</li> </ul>		
<b>6. Teaching and Learning Methods for Students with Special Needs</b>	Not applicable		
<b>7. Student Assessment:</b>			
<b>a. Procedures used:</b>	<ul style="list-style-type: none"> <li>• Final written exam.</li> <li>• Final oral exam.</li> </ul>		
<b>b. Schedule:</b>			
<b>c. Weighing of Assessment:</b>	<ul style="list-style-type: none"> <li>• Final written exam.: 100 degrees.</li> <li>• Final oral exam.: 100 degrees.</li> </ul>		
<b>8. List of Textbooks and References:</b>			
<b>a. Course Notes</b>			

<b>b. Required Books (Textbooks)</b>	<ul style="list-style-type: none"> <li>• Adler's Physiology of the eye. Levin LA, Nilsson SFE, Ver Hoeve J, Wu SM (eds). Adler's physiology of the eye, 11<sup>th</sup> ed. Edinburgh, London: Elsevier Inc. 2011 <a href="http://www.elsevier.com/permissions">www.elsevier.com/permissions</a>.</li> </ul>
<b>c. Recommended Books</b>	<ul style="list-style-type: none"> <li>• Duane basic ophthalmic science.</li> </ul>
<b>d. Periodicals, Web Sites, ..., etc.</b>	<ul style="list-style-type: none"> <li>• British journal ophthalmology: <a href="http://www.BJO.com">http://www.BJO.com</a></li> <li>• Ophthalmology.</li> <li>• American journal ophthalmology.</li> <li>• Achieve Ophthalmology.</li> <li>• Egyptian journal ophthalmology: <a href="http://www.eos1902.com">http://www.eos1902.com</a></li> <li>• <a href="http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1755-3768">http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1755-3768</a></li> <li>• <a href="http://ophthalmology.blogspot.com/">http://ophthalmology.blogspot.com/</a></li> <li>• <a href="http://pubmed.com">http://pubmed.com</a></li> </ul>

**Course Instructor:**

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**Head of Department:**

**Prof. Dr. .**

**Date: 1/11/2014**