

Subject Description Form

Subject Code	SO2006
Subject Title	Ocular Anatomy and Physiology 2
Credit Value	3
Level	2
Pre-requisite	NIL
Objectives	To learn the basic anatomy and physiology of the posterior segment of the eye and the visual pathway.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. describe the mechanism of aqueous humour formation, its function and composition and relating the understandings to intraocular pressure (IOP) and ocular pathophysiology; b. understand the mechanism of phototransduction and describe the cellular structures and functions of the retina, and describe the relationship of the retinal functions with the various vegetative functions of other ocular structures; c. understand sensory and motor pathways related to the eye and operation of cranial nerves that affecting the eye; d. understand different structures related to the visual pathway and their functions; e. apply knowledge of ocular anatomy and physiology in explanation of clinical cases and real-life examples.
Subject Synopsis/ Indicative Syllabus	Ciliary body Aqueous humour inflow and outflow Intraocular pressure Vitreous humour Nerve supply to ocular structures Retinal anatomy and physiology Visual pathway
Teaching/Learning Methodology	Lecture: The basic anatomy and physiology of the posterior segment of the eye and the visual pathway will be covered. Tutorial: Small group discussion of topics of interests. Answering questions raised by students. Laboratory: Ocular slide drawings and intraocular pressure (IOP).

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)				
			a	b	c	d	e
	1. Coursework (test)	25	✓	✓	✓		
	2. Coursework (two Practical sessions)	25	✓	✓		✓	✓
	3. Examination	50	✓	✓	✓	✓	✓
Total	100						
<p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <ul style="list-style-type: none"> - One written mid-term test will be arranged during the course to examine students' knowledge on various topics individually. - Two laboratory reports will be required to demonstrate their knowledge on the ocular structures and intraocular pressure (IOP). - Final examination will be arranged to examine students' knowledge on all the topics covered. 							
Student Study Effort Required	Class contact:						
	▪ Lecture						24 Hrs.
	▪ Laboratory						6 Hrs.
	▪ Tutorial and seminar						8 Hrs.
	Other student study effort:						
	▪ E-learning						6 Hrs.
	▪ Self-study						70 Hrs.
Total student study effort:						114 Hrs.	
Reading List and References	<u>Prescribed Reading</u>						
	Helga Kolb. Webvision: http://webvision.med.utah.edu						
	Oyster CW. The Human Eye: Structure and Function. Sinauer Associates, 1999.						
	Lens A. Ocular anatomy and physiology. Slack, 2008.						
Levin, LA & Adler FH. Adler's Physiology of the Eye - Clinical Application. 11th Ed. Saunders, 2011							

Recommended Reading

Forrester J, Dick AW, McMenemy PG and Roberts F, Roberts F. and Pearlman E. The Eye, Basic Sciences in Practice, 4th Ed. Saunders Elsevier, 2015

Stanfield C. Principles of Human Physiology. 6th Ed. Pearson, 2016

Allingham RR. Shields' Textbook of Glaucoma. 6th Ed. Wolters Kluwer Health, 2011

Dowling JE. The Retina: An Approachable Part of the Brain. Revised Edition, Harvard University Press, 2012