

LEARNING UNIT 4
OS 212: Locomotion and Sensation
Ophthalmology 212: Eye Module

Module Description: *This module will review the normal anatomy and physiology of the eye. It will then introduce the ocular symptomatology and presentations needed in the diagnosis of different eye diseases. To facilitate diagnosis, medical students will be taught history-taking that is focused on extracting patient information related to the eye complaint and the 5-point eye examination. Lastly, this module will also introduce basic management options for different eye diseases.*

Dates: *January 23-27, 2023 (Block A) and May 15-19, 2023 (Block B)*

Module Coordinators: *Dr. Roland Joseph D. Tan and Dr. Paulita Pamela P. Astudillo*

Module Coordinators Contact Details: rdtan@up.edu.ph and ppastudillo@up.edu.ph

General Objective:

This module aims for the medical students to correlate pathologic changes in the anatomy and physiology of the eye to clinical symptomatology to identify common eye diseases and recommend basic management.

Specific Objectives:

At the end of the module, the medical student shall evaluate a patient with an eye complaint, build a differential diagnosis and plan a specific management option by:

Cognitive Domain

Learning Objectives	Content	Teaching/ Learning Strategies	Evaluation
<ul style="list-style-type: none"> Describing the normal anatomy and physiology of the eye 	Anatomy <ul style="list-style-type: none"> Orbit Eyelids & Lacrimal drainage system Extraocular Muscles Cornea and Conjunctiva Uvea, choroid and Sclera Retina Physiology <ul style="list-style-type: none"> Physical Optics Geometrical Optics Physiologic Optics Neuro-ophthalmologic Optics 	Asynchronous video lectures in the VLE <i>Anatomy and Basic Eye Exam Lectures</i> <ul style="list-style-type: none"> <i>Anatomy Lecture Part 1 (18 mins)</i> <i>Finding your Blind Spot (6 mins)</i> <i>Anatomy Lecture Part 2 (17 mins)</i> <i>Physiology and Anterior Segment Lectures</i> <ul style="list-style-type: none"> <i>Physiology of the Eye (60 mins)</i> Chapters 1 and 2 of Self-Instructional Materials (SIM) in Ophthalmology 3 rd Edition	MCQ written examination

<ul style="list-style-type: none"> Identifying clinical signs and symptoms and correlating them to pathologic changes in the anatomy and physiology of the eye to diagnose a disease 	<p>Clinical Algorithm for Redness, Tearing and Discharge</p> <p>Anterior segment pathologies</p> <ul style="list-style-type: none"> Abnormal vision Abnormal sensation Abnormal appearance <p>Posterior segment pathologies</p> <ul style="list-style-type: none"> Blurring of vision Visual field defect Metamorphopsia, micropsia, macropsia Flashes, Floaters Pain 	<p>Asynchronous video lectures in the VLE</p> <p><i>Physiology and Anterior Segment Lectures</i></p> <ul style="list-style-type: none"> <i>Red Eye, Tearing, and Discharge (30min)</i> <i>Symptoms and Signs of Anterior Segment Problems (1.5hrs)</i> <p><i>Systemic Manifestations and Posterior Segment Lectures</i></p> <ul style="list-style-type: none"> <i>Posterior Segment Pathologies (50min)</i> <p>Chapters 5 and 6 of Self-Instructional Materials (SIM) in Ophthalmology 3rd Edition</p>	
<ul style="list-style-type: none"> Identifying clinical signs and symptoms and correlating them to pathologic changes in the anatomy and physiology of the extraocular muscle and orbit to diagnose a disease 	<p>Eye Deviation or Strabismus</p> <p>Globe displacement</p> <ul style="list-style-type: none"> Proptosis 	<p>Asynchronous lectures in the VLE</p> <p><i>Ocular Trauma and Eye Deviation Lectures</i></p> <ul style="list-style-type: none"> <i>Eye Deviation and Globe Displacement (30min)</i> <p>Chapters 7 of Self-Instructional Materials (SIM) in Ophthalmology 3rd Edition</p>	
<ul style="list-style-type: none"> Identifying signs and symptoms and correlating them systemic diseases with ophthalmologic manifestations 	<p>Ocular manifestations of systemic diseases</p>	<p>Asynchronous lectures in the VLE</p> <p><i>Systemic Manifestations and Posterior Segment Lectures</i></p> <ul style="list-style-type: none"> <i>Ocular Manifestations of Systemic Disease (50min)</i> <p>Chapters 8.3 of Self-Instructional Materials (SIM) in Ophthalmology 3rd Edition</p>	
<ul style="list-style-type: none"> Distinguishing ocular emergencies 	<p>Ocular Emergencies</p> <ul style="list-style-type: none"> Traumatic Non-traumatic 	<p>Asynchronous lectures in the VLE</p> <p><i>Ocular Trauma and Eye Deviation Lectures</i></p> <ul style="list-style-type: none"> <i>Ocular Trauma and Emergencies (60min)</i> 	

		Chapters 8.5 of Self-Instructional Materials (SIM) in Ophthalmology 3 rd Edition	
<ul style="list-style-type: none"> Examining and extracting relevant information from the history of the patients with eye complaint 	Chief complaint Ocular History Systemic History Treatment History Other pertinent information	Asynchronous lecture in the VLE <i>Anatomy and Basic Eye Exam Lectures</i> <ul style="list-style-type: none"> History Taking (10min) 	2 Small group discussions <ul style="list-style-type: none"> Synchronous Paper discussions for those with limited online access 1 – 100 points - 30% 2 - 100 points - 30%
<ul style="list-style-type: none"> Correlating the principles behind each test in the 5-point eye examination to its performance 	Visual Acuity measurement Gross and Pupillary Examination Motility examination Digital Tonometry Direct ophthalmoscopy	Asynchronous lecture in the VLE <i>Anatomy and Basic Eye Exam Lectures</i> <ul style="list-style-type: none"> Visual Acuity Testing (15min) Gross Eye Examination (10min) Extraocular Muscle Movement and IOP (8min) Fundus Examination (16min) 5 Point Basic Ophthalmologic Exam (18min) Chapter 4 of Self-Instructional Materials (SIM) in Ophthalmology 3 rd Edition	
<ul style="list-style-type: none"> Formulating a differential diagnosis for a patient with an eye problem based on the common signs and symptoms elicited from history taking and eye examination 	Integration of all of the module contents	2 Case discussions: Case 1: Eye Redness and Emergencies Case 2: Eye deviation Synchronous small group discussion or paper discussions for those with limited online access	
<ul style="list-style-type: none"> Proposing a basic management plan by recognizing an eye condition that <ul style="list-style-type: none"> requires immediate or urgent intervention requires referral to ophthalmologist needs pharmacologic and/or surgical treatment 			

Psychomotor Domain

Learning Objectives	Content	Teaching/ Learning Strategies	Evaluation
<p>To perform the 5-point eye examination:</p> <ol style="list-style-type: none"> 1. Measure the presenting and best corrected distance and near (as needed) visual acuity of a patient based on the available visual acuity measurement procedure and chart and report the result properly. 2. Examine grossly the eye and its adnexa and the pupil using light and report pertinent positive and negative findings. 3. Evaluate the ocular motility of both eyes and report the results properly and completely. 4. Evaluate the pressure of both eyes and report the results properly. 5. View the posterior pole of the eye using direct ophthalmoscope and report the results properly and completely. 	<p>Visual Acuity measurement Gross and Pupillary Examination Motility examination Digital Tonometry Direct ophthalmoscopy</p>	<p>Asynchronous lecture in the VLE</p> <p><i>Anatomy and Basic Eye Exam Lectures</i></p> <ul style="list-style-type: none"> ● <i>Visual Acuity Testing (15min)</i> ● <i>Gross Eye Examination (10min)</i> ● <i>Extraocular Muscle Movement and IOP (8min)</i> ● <i>Fundus Examination (16min)</i> ● <i>5 Point Basic Ophthalmologic Exam (18min)</i> <p>Chapter 4 of Self-Instructional Materials (SIM) in Ophthalmology 3rd Edition</p>	<p>Mini Objective Structures Clinical Examination (OSCE)</p> <ol style="list-style-type: none"> 1. Synchronous thru Zoom 2. Video submission or paper case report for those with limited online access

Affective Domain

Learning Objectives	Content	Teaching/ Learning Strategies	Evaluation
To demonstrate the following behaviors recognized to be good attitudes and professional: <ul style="list-style-type: none"> • Displays initiative and enthusiasm to learn by watching assigned video lectures and participating in SGD • Displays appropriate behavior in terms of dress/grooming and punctuality • Displays respect and consideration for peer 	Generation and utilization of relevant knowledge Adherence to professional and ethical standards	UP Manila Student Handbook 2018 Revision UPCM Learning Outcomes and Program Redesign 2020	Integrated in the SGD and OSCE grading

Reference Material:

1. Self-Instructional Materials (SIM) in Ophthalmology 3rd Edition
2. UP Manila Student Handbook 2018 Revision

Grading for this Module:

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| 1. Multiple Choice Questions written examination
<i>100 items to be given on Day 5</i> | 30% |
| 2. Small Group Discussion for Case 1
<i>Please refer to the Grading guide for SGD</i> | 30% |
| 3. Small Group Discussion for Case 2
<i>Please refer to the Grading guide for SGD</i> | 30% |
| 4. Objective Structured Clinical Examination
<i>Please refer to the Grading guide for OSCE</i> | 10% |
| Total | 100% |