

AJK Medical College, Muzaffarabad



SPECIAL SENSES MODULE (SPS)

2nd Year MBBS

Module Code: SPS-0112

Pre-requisite modules:

Foundation, Renal, EMR & MFS Modules

Duration= 4 weeks

Starting on 13th June, 2016

DEPARTMENT OF MEDICAL EDUCATION

CONTENTS

1. SPS Module Team
2. Introduction to the Module
3. Module themes
4. Learning Objectives
5. Table of Specifications (TOS)
6. Cases Scenarios and critical questions
7. Recommended Textbooks
8. Timetable
9. Trouble shooting

MODULE TEAM

Dr. Farooq Kayani	Planner/ENT
Dr. Munir Baig	Co-ordinator
Prof. Dr. Muhammad Ayub Awan	Medical Education
Dr. Sarmad Latif Awan	Medical Education
Dr. Zahid Azeem	Biochemistry
Dr. Asad Bilal Arif	Anatomy
Dr. Ijaz Anwar	Physiology
	ENT

RATIONALE OF SPS Module

ENCEPHALIZATION is an evolutionary trend in which special sensory organs develop in the heads of animals along with corresponding neural systems in the brain. These special sensory systems, which include the visual, auditory, vestibular, olfactory, and gustatory systems, allow the animal to detect and analyze light, sound, and chemical signals in the environment, as well as to signal the position of head. The capacity to see, hear, smell and taste the wonders of the world around us once allowed us to survive. An individual's total experience of the external world—what he or she "feels"—is a blending of all the senses. The senses take in information about the world in the form of light waves, sound waves, and dissolved chemicals.

The present module has been designed to unfold the structural organization, functional and biochemical complexities of special senses. With the help of real life scenario's the congenital and acquired anomalies and structural, functional and biochemical aspects of this system will be introduced. In comparison to other systems of the body special senses itself constitutes multiple systems which makes it more interesting and challenging for both facilitator and student.

Teaching Strategy: the content of this module will be delivered by a combination of different strategies. These include small group discussions (SGD), large group interactive sessions (LGIS), demonstrations in dissection hall, lab practical and clinical skill sessions at skill lab. Group projects will be assessed at the end of the block.

Organization of Module

The module consists of eight themes, each based on real life situation. The module will employ different modes of instruction, briefly described below. Major emphasis will be on discussion, analysis and deduction; all by the students and guided by the faculty.

Content Delivery

Entire curriculum will be delivered by clinical case scenarios each covering a theme. Read the cases and objectives of the theme which you are supposed to encounter next day, understand and explain the case to yourself and read the relevant information. Following learning/teaching strategies will be employed to discuss the cases:

Small Group Discussion

Main bulk of the course content will be delivered in small group sessions. Each theme has an associated case. The case will be the centre around which learning will take place. Depending on the case you might be required to deduce objectives and learning issues or only learning issues. Every group will have a facilitator assigned to it. The facilitator will be there to keep you on track, giving you maximum liberty to discuss and achieve the objectives as a group. Small groups in some cases may be followed by a wrap up session. Rest of the information will be there in the schedule.

Large group

Large group instruction will be employed at times sparingly. Attend large group sessions with the following focus

- a. Identify important points
- b. Ask questions of points not well understood in the text
- c. Measure your learning comprehension

Videos

Video demonstrations on history taking and clinical examination, on diseases will be shown to give you an idea into the disease process, testing and practical aspect of communication with the patients.

Hands-on Activities/ Practical

Practical activities, linked with the case, will take place.

Lab:

Attend your scheduled lab and take advantage of free time for study .Use your labs to correlate text structures to actual specimens in lab practice.

Self-Directed Learning

A few SDLs have been added in between to create an environment for you to search literature as well as to deduce and synthesize information from different sources to meet the learning objectives. It will also help in breaking the monotonous / strenuous schedule and make you life-long learner.

Jovnal Club:- Innovative research articles will be discussed and analyzed critically by the students in small group sessions and then each group will present their critical appraisal in large group.

Assessment

In this 4-weeks duration module, you will have surprise quizzes and intermittent short tests. A full-fledged formative assessment will be taken at the end of module. This will give you an idea about the format of the examination that you will go through at the end of the Block. Of course, this will be followed by feedback on your performance in the exam.

Marks obtained in the module examination will contribute 30% (internal assessment) towards end of year Professional University Examination.

Recommended list of Icons



Introduction to case



For Objectives



This Icon will refer to critical questions



This Icon will refer to Lab sessions



This Icon will refer to resource material



WORDS

This will refer to Keywords

Themes

Watering eye

1. Demonstrate the topographic anatomy, blood & nerve supply of eye lids, conjunctiva, eye ball and lacrimal apparatus on Cadaver/ manikin
2. Describe the development and congenital anomalies of eye and orbit
3. Enlist the gross anatomical features of conjunctiva, sclera and cornea along with their blood and nerve supply
4. Identify the location and connections of (pre & postganglionic fibers). Pterygopalatine Ciliary ganglion on manikin/models/cadavers
5. Identify the histological features of cornea on a given slide
6. Perform corneal reflexes on simulated patients
7. Trace the pathway of corneal reflexes

2 Painful eye

1. Describe the morphology of eye ball and chambers of eye ball
2. Describe the two fluid system of eye (aqueous humor and vitreous humor).
3. Describe/ illustrate formation and circulation of aqueous humor
4. Define Glaucoma. Describe the regulation of intraocular pressure.
5. Describe the mechanism of blindness caused by increased intraocular pressure.
6. Demonstrate Tonometry on SP/manikin

3. Diplopia

1. Enumerate the origin, insertion and action of extrinsic and intrinsic muscles of eye ball
2. Demonstrate movements of eye ball on yourself/SP/patient

3. Identify the intraorbital course of oculomotor, trochlear, trigeminal and abducent nerves on manikins
4. Check the integrity of the extrinsic and intrinsic muscles of eye on SP
5. Describe the structure and functions of vascular pigmented coat of eye ball (choroid, ciliary body, iris and pupil along with their nerve supply)
6. Describe the development of lens and iris and ciliary body

4. Diminished vision

1. Identify the anatomy of eye lens and its supporting ligaments on models/ specimens.
2. Correlate the errors of refractions with different anomalies & their treatment.
3. Enlist the sources, chronological order, positional changes, histogenesis and congenital anomalies associated with the development of eye
4. Demonstrate the integrity of optic nerve on SP
5. Demonstrate the origin, course and distribution of ophthalmic artery and veins on cadavers/manikins
6. Describe the nervous coat of Retina
7. Identify the histological features of retina on a given slide
8. Describe the Optics of the eye in relation to image formation on retina
9. Describe the mechanism of Accommodation.
10. Demonstrate pupillary light reflex and interpret its afferent and efferent limbs along with its integrating center
11. Demonstrate accommodation reflex and its afferent and efferent limbs along with its integrating center
12. Define Visual acuity and measure Visual acuity on SP
13. Describe the specific functions of structural elements of retina.
14. Illustrate the blood Supply of Retina in health and disease.
15. Describe the biochemical basis of night & color blindness.
16. Describe the mechanism of light and dark adaptation and their value in health and disease.
17. Interpret the Role of vitamin A in visual cycle
18. Perform color vision test on Ishihara chart and differentiate between red and green color defects
19. Describe the specific functions of different cells of retina.
20. Define Perimetry. Perform the steps of perimetry on a subject
21. Describe the mechanism by which eye determine distance of an object from the eye.

(Neurophysiology of the Eye will be done in Neurophysiology and Behaviour Module)

5. Deafness

1. Describe the development of external , middle & internal ear along with their congenital anomalies
2. Describe the structure and functions of the external, middle & internal ear in conduction of sound.
3. Demonstrate the salient anatomical features of external ear on Manikins/ cadaver/models
4. Enlist the boundaries of middle ear and its contents
5. Identify salient anatomical features of medial, anterior, and posterior wall of the middle ear on manikin
6. Describe the salient anatomical features of auditory ossicles and muscles of the ossicles

7. Describe the importance of tympanic reflex & impedance matching
8. Demonstrate the role of Auditory tube in equalizing the air pressure in tympanic cavity and nasal pharynx
9. Enlist the boundaries of mastoid antrum and its important relations
10. Demonstrate the intraosseous course of facial nerve on skull
11. Describe course of cochlear nerve.
12. Describe mechanism of hearing in human being.
13. Define frequency & intensity of sound, noise, and decibel.
14. Enumerate common causes of deafness
15. How will you investigate a patient having deafness

6. Vertigo

1. Describe the anatomy of bony and membranous labyrinth
2. Demonstrate the course and branches of vestibular nerve on models
3. Identify the histological features of cochlea and vestibule on given slides
4. Describe the formation, circulation and function of perilymph and endolymph
5. Describe the structure and functions of vestibule and semicircular canals
6. Describe mechanism of human body balance system and correlate it with vertigo.
7. Enumerate common causes of vertigo.
8. How will you investigate a patient having vertigo.

7. Anosmia

1. Revisit olfactory mucosa of the nose.
2. Revisit anatomy and physiology of nose.
3. Illustrate olfactory pathway
4. Illustrate histology of olfactory epithelium under light microscope
5. Interpret the role of smell on visceral functions
6. Trace the smell pathway from nose to CNS
7. Describe different types of smell disorders.

8. Sweet and sour

1. Revisit the location of taste buds in oral cavity.
2. Revisit anatomy of pharynx and larynx.
3. Illustrate microscopic picture of taste buds.
4. Trace the sense of taste from tip of tongue to central nervous system.
5. Describe taste abnormalities.
6. Describe stomatitis and pharyngitis.

TABLE OF SPECIFICATION SPS MODULE (TOS)

1	Watering eye	10%
2	Painful eye	10%
3	Diplopia	10%
4	Diminished vision	20%
5	Deafness	20%
6	vertigo	10%
7	Anosmia	10%
8	Sweet and sour	10%
Total		100%

Clinical cases

Theme-1

Clinical Case : Watering of Eye (Ectropion)



Case History:

A 40-year-old woman comes to OPD of AIMS complains that her eyes are always watering.

History of Present Illness:

She states that she has to dry her eyes constantly as the tears keep running down her cheeks, and she believes that this is causing her lower lids to appear red.

Past Medical History:

She cannot recall when it all started, but is certain that the watering has persisted for years, and is gradually becoming worse. No history of any major illness in the past

Personal Health:

She does not follow any particular diet.

Family Medical History:

No history of any major illness in the family

Social History and Lifestyle:

She is a maid servant in Upper plate and lives in a single room house with a family of 6 persons.

Review of Systems Cardiovascular: Normal

Respiratory: The patient denies any history of pain, wheezing, chronic cough, hemoptysis, fever or night sweats.

Gastrointestinal: Normal **Genital/Reproductive:** Normal

Urinary: Normal

Musculoskeletal: Normal

CNS: Normal

Psych: Patient feels a little bit depressed

Examination:

Eye Examination:

Examination reveals symmetrical thickening and redness of her lower eyelids, and On closer inspection, it is apparent that the eyelashes of lower lids are everted and pointing inferiorly. The puncta of the inferior canaliculi on both sides are also not in contact with the eyeball. Examination of the cornea after the instillation of 2% fluorescein drops does not reveal an obvious epithelial defect. There is a mild decrease in visual acuity while the rest of the examination is normal for both eyes.

General physical examination

Temperature: 99F

Pulse: 80 bpm with normal peripheral pulses Respiration: 18 pm

Blood Pressure: 110/70 mmHg

General Appearance: 40 Year old woman, oriented to person, place and time, bit anxious.

Neck: Thyroid not palpable, trachea central,

CVS: No jugular venous distention, no carotid bruit, no murmurs on auscultation; normal S1 and S2

Respiration: Normal shape chest, equal movements bilaterally, with vesicular breathing, no added sound

GIT: flat; non-tender to palpation; no masses; no hepato-splenomegaly, bowel sound present

CNS: No neurological deficit found



Critical Questions:

- What is the physiological basis of watering in this case?
- What is the usual biochemical nature of tears in such cases?
- Illustrate the formation and drainage of lacrimal fluid in health and disease.
- What is the neuroanatomical basis of eversion of lower lids?
- Does blinking of eye lids play any role in drainage of lacrimal fluid?

Theme-2 Painful Eye



Mrs Robina Ahmad a 55 year old female presented to Ophthalmology OPD of AIMS, with pain in right eye for the past three months that has suddenly increased in severity. She complains of blurred vision, severe headache, nausea and vomiting. For the past three months she has complaints of seeing halos around lights and other visual objects. She is hypertensive (on ACE inhibitors) and suffers from immature cataract.

On examination she has fixed mid-dilated right pupil, painful eye movements and bilaterally diminished visual acuity. Tonometry revealed raised intra-ocular pressure (IOP) for right eye. Fundoscopy revealed cupping of right optic disc. She was admitted in AIMS for management.



Critical Questions:

- What is anatomico-physiological basis of raised IOP.
- Describe the composition, formation and circulation of aqueous humor (AH) in eye.
- What is the correlation of glaucoma to cataract, ACE inhibitors and hypertension?
- Illustrate Iridi-corneal angle in health & disease.
- What medical and/or surgical remedies can be applied in cases of over production OR blockage of AH?
- What is the role of Choroid in glaucoma?
- What is the basis of mid-dilated pupil in glaucoma?
- Differentiate between close angle and open angle glaucoma?

Theme-3: Diplopia



A 74-year-old female retired school teacher resident of Nasari presented in eye OPD of AIMS hospital Muzaffarabad with the complain of double vision when looking to the right.

History of Present illness :-

According to the patient she was alright ten days back when she noticed double vision more marked on looking to the right.

She denied any head trauma or other accompanying symptoms.

Past medical history:-

Her past history revealed hypertension, peripheral facial nerve palsy 13 years before, intercostal herpes zoster 4 years before and acute pyelonephritis 3 years before. Family History:-

Her Father has diabetes and mother died of stroke

Personal History:-

Married, has four children, non smoker non addict

Socioeconomic History:-

Belongs to middle class family,

Drug History:-

On antihypertensive medicines from 15 years

General Physical examination:-

Patient well oriented in time, person and place Pulse: 80/ m

BP: 150/90 mm of Hg Temperature: 98

Respiratory rate: 22

Neurological examination:-

Comprehensive neurological assessment failed to detect any other abnormality except for the convergent squint with right sided lateral rectus palsy causing diplopia maximal on gazing to right without fatiguability or nystagmus.

All other eye movements, both optic fundi, visual acuity and colour perception were all unremarkable

Systemic examination:-NAD

Complete blood count and standard biochemistry tests were normal, except for elevated blood glucose level, with whole day profile ranging from 8.4 to 11.9 mmol/L.

Cholesterol level was 6.5 mmol/L, and triglycerides 2.14 mmol/L.

Ultrasound and MSCT of the orbits were normal.

Brain MRI revealed few chronic vascular lesions supratentorially, with normal brainstem.

MR angiography was normal.

Definitive diagnosis was diabetic ANP.



Critical Questions

- Identify and demonstrate action/s of extrinsic and intrinsic muscles of Eye ball.
- Perform Hirschberg's test
- Test motor innervations of eye ball muscles.
- Perform Cover/uncover test and Hess charting

Theme-4 Diminished vision



A 67 year-old lady presented with complaints of gradual decrease in vision in both the eyes since 2 years.

She was unable to carry out her daily activities and could not recognize people at some distance till they came quite close. Watching television and reading were becoming increasingly difficult for her.

Past medical history: Known hypertensive 15 years back and diabetic from last 10 year

Family History: NAD

Drug History: Antihypertensive and oral hypoglycemic drugs

On examination her vision in the right eye was 6/60, while left eye had 6/36. Anterior segment examination showed normal anterior chambers with normal pupils. Lens had cataract in both the eyes, right eye more than left eye.

Fundus examination showed no abnormality and Intraocular Pressure was 14cm of water and 16cm of water.



- the anatomy of eye lens with errors of refractions.
- the nervous coat of Retina
- Interpret the Role of vit A in visual cycle
- Define Perimetry.

Theme-5 Deafness



A 40 year male presented in ENT OPD OF AIMS with history of severe bilateral earache, mild deafness and tinnitus for two days

He developed these problems during air travel from Saudi Arabia to Islamabad. The deafness and earache are sudden in onset and are progressive in nature. Sometimes he also feels dizzy for few seconds. There is no ear discharge

There is no problem regarding nose, throat or any other body system. He has taken some pain killer drug but has little relief.

Clinical examination shows that he is average built, fully oriented and has normal vital signs.

Ears examination shows that both eardrums are congested and retracted.

Tuning fork tests shows conductive deafness in both ears.

Examination of nose and throat is normal. **Systemic examination** is also normal.



- The structure and functions of the external, middle & internal ear in conduction of sound.
- The role of Auditory tube in equalizing the air pressure in tympanic cavity and nasal pharynx
- Webers and Rinnes test

Theme-6 (Vertigo)



A 45 year male patient came in ENT OPD of AIMS with complaints of severe vertigo for last one day. He also has tinnitus and reduced hearing in right ear. The vertigo started suddenly yesterday and since then it was continuous. He feels that all things are rotating around him. There is no specific aggravating or relieving factor. There was no effect of position change. The vertigo is associated with nausea and vomiting. The hearing loss is in right ear, mild to moderate, continuous with no aggravating or relieving factors. He has ringing sounds in his right ear and is constant with no aggravating or relieving factors. He has past history of 4-5 similar attacks during last three years each lasting for a week or so and completely improved by medication. There was no complain in between the attack. There is no history of head trauma or using vestibulo-toxic drug. Clinical examination showed normal vital signs. ENT examination showed SND on right ear. Spontaneous nystagmus was positive with fast component towards left side. On gait testing patient deviated towards the right side when was walking with eyes closed. Romberg's test showed that patient swayed towards right side when he was standing with eyes closed. Cerebellar function tests were normal. PT audiogram showed moderate SNHL in all frequencies on right side and normal hearing on left side.



CRITICAL QUESTIONS

- Define vertigo. What are types of vertigo?
- Differentiate between physiological and pathological vertigo; peripheral and central vertigo?
- What is nystagmus? Give its types. How nystagmus is checked clinically?
- What are cerebellar function tests?
- How will you investigate a case of vertigo?
- what first aid treatment will you give to a case of acute vertigo?
- Describe development, structure and function of internal ear.

Theme-7 & 8



Miss khalida Rashid 38 years old female presented in ENT OPD of Abbass institute with complains of loss of smell from last one week with altered sensation of taste, running nose from two weeks with off and on head ache and dizziness

Past History: Patient has a history of allergic rhinitis from last two years

Family History: NAD

Personal History: School teacher, married from last ten years, non addict

Allergic history: allergic to pollens

Examination

Pulse 88/ min

BP 130/80 mm hg

ENT Examination: Nasal congestion with discharge

Systemic examination : NAD

X- Ray Skull: Hazziness in paranasal sinuses

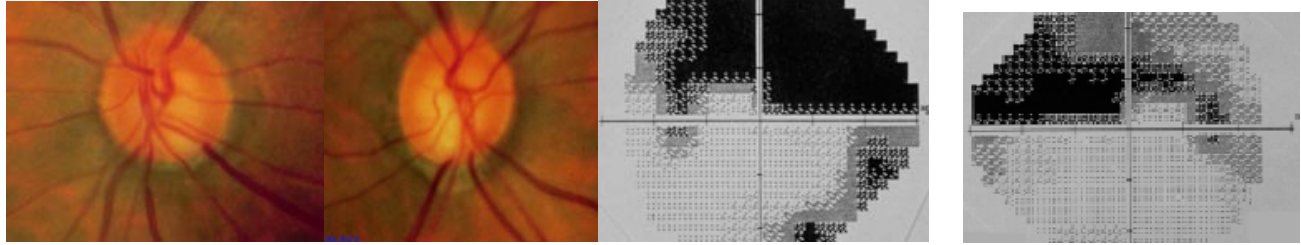


Critical question:

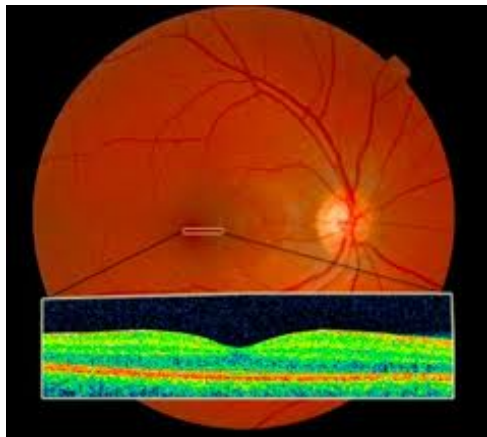
- Define Allergic rhinitis
- What is haziness of paranasal sinuses
- Describe olfactory mucosa and olfactory pathway
- Point out the location of taste buds in oral cavity
- Trace the sense of taste from tip of tongue to central nervous system.

PBL 1A

- A 48 year-old man presented in eye OPD at CMH Muzaffarabad. He describes painless, progressive visual loss in both eyes for 20 years. He has no history of inflammation in the eyes. He has no history of trauma, blood loss, shock, or steroid use around the eyes. He denies any history of jaw claudication, scalp tenderness, headaches.
 - There was no significant finding past history or family history, no drugs and history of any addiction.
 - **On Eye Examination**
 - Vision: 6/9 OD, 6/7.5 OS
 - Pupils: Normal OU, No APD
 - Motility: Full OU
 - Color: Normal OU
 - External: Normal OU
 - Slit lamp examination: Normal OU
 - Tonometry: 26 OU, ranges FROM 11-21 OU during diurnal curve measurements
- Gonioscopy: Grade 4 angles, open 360 degrees without pigment, iris processes, synechiae, or bombe OU
Fundus examination: Macula and vessels appeared normal, the discs are shown in Figures 1
Visual fields: Figures 2



OCT:



PBL - 2

A 22 years old man resident of Lipa presented to Eye Department, AIMS Hospital with complaints of decreased vision in both eyes after maghrib prayers. He works as driver in Qadri coach service and had difficulty in driving at night. He told the optician that he had no such problems in day light but has trouble especially when he enters from bright light to dim light. He had difficulty in seeing stars on a clear night or walking through a dark room often in movie theater.

The parents of the patient were paternal cousins. The patient had a history of diabetes since last two years. He is otherwise healthy and there is no history of trauma.

Clinical Examinations:

1. Visual acuity in both eyes was 6/6, unaided.
2. Pupils were regular in size and reacting to light.
3. Anterior segment examination in both eyes was unremarkable.
4. There were pigmentary changes in both fundi suggestive of Retinitis Pigmentosa.

The optician prepared for the following tests

Slit lamp examination, Electroretinogram (ERG) and visual field

PBL – 3

A 40 years lady presented to ENT OPD OF AIMS with complains of deafness and recurrent right ear discharge for 3 years. Her ear discharge is yellowish in color, scanty and foul smelling. She takes treatment from local GP with temporary relief. General

physical examination shows normal vital signs. She has an average built and is fully oriented. She has no neck swelling.

Local examination of right ear shows yellowish scanty discharge with marginal eardrum perforation. Tuning fork tests shows right ear conductive deafness. Fistula test shows nystagmus. Left ear examination is normal. Examination of Nose and throat showed deflected nasal septum and kissing tonsils. Systemic examination is normal. Blood and urine tests are normal.

X-Ray PNS shows hazy right maxillary sinus.

Pure tone audiometry shows moderate conductive deafness of right ear.



Resource for learning

Reference Books:

- 1) For ENT TEXT BOOK IS 'EAR,NOSE AND THROAT DISEASES BY PL DHINGRA'. Other reference books are also available in library.
- 2) For EYE text book is 'Parson's book of eye
- 3) Guyton 12th Edition
- 4) Sherwood 7th Edition
- 5) Ganong edition 23rd Edition
- 6) Clinical Anatomy by Snells
- 7) Last's Anatomy by RJ Last
- 8) Clinically Oriented Anatomy by Keith. L. Moore
- 9) The Developing Human by Moore & Persaud
- 10) Basic Histology by Luiz Carlos Junqueira
- 11) DiFiore's Atlas of Histology 11th Edition
- 12) Lippincot's Biochemistry review 5th edition
- 13) Harper's Biochemistry 28th Edition
- 14) Mark's Biochemistry 3rd Edition
- 15) Macleod's Clinical Examination
- 16) EYE
- 17) ENT

Glossary: Following online medical dictionaries can be referred

www.nlm.nih.gov/medlineplus/mplusdictionary.html www.online-medical-dictionary.org

www.medterms

AJK Medical College, Muzaffarabad

Schedule for SPS Module – 2nd Year

Week 1 (20th – 24th March 2017)					
	20th March 2017	21st March 2017	22nd March 2017	23rd March 2017	24th March 2017
Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 – 9:00 hrs	<u>LGIS</u> Introduction to the Module / Orbit & related Disease Dr. Col. Jawad	<u>SGD</u> External Muscles of the Eyeball Team-1 <u>Wrap Up</u>	<u>LGIS</u> Optics & refraction Dr. Munir amjad baig	<u>Pakistan Day</u> <u>23rd March</u> <u>2017</u>	<u>LGIS</u> light & dark adaptation Col Jawad
9:00 – 10:00 hrs	PBL – 1A Dr. Ijaz & Team -2	Dr. Asad Bilal/Dr. Shakil	<u>LGIS</u> Ocular Movements Dr. Bushra		PBL – 1B Dr. Ijaz & Team -2
1000 – 1030 hrs		Break 10:00 – 1030 hrs			Break 10:00 – 1030 hrs
1030– 12:30 hrs	<u>SGD</u> Osteology of the Orbit Team-1 <u>Wrap Up</u> Dr. Asad Bilal/Dr. Shakil	<u>Practical</u> Histo: 1-50 SDL: 51-100 Lacrimal gland & cornea Prof Ghuncha & Team-1	<u>Practical</u> Histo: 51-100 SDL: 1-50 Lacrimal gland & cornea Prof Ghuncha & Team-1		<u>Dissection</u> Eye Ball Dr. Asad & Team-1
12:30– 13:30 hrs	<u>DSL</u> lacrimal Apparatus	<u>LGIS</u> Visual Pathways Prof. Ayub	<u>LGIS</u> Development of Eye Dr. Shakil		<u>SDL</u>
1:30-2:00 hrs	prayer break				
14:00 – 1600 hrs	<u>Dissection</u> Lacrimal Apparatus Eyelids, conjunctive Dr. Asad & Team-1	<u>DSL</u> Optics & Reflections	<u>SGD</u> Accommodation and papillary light reflexes Team-2 <u>Wrap Up</u> Dr. Ijaz Anwar		SDL

AJK Medical College Muzaffarabad

Schedule for SPS Module – 2nd Year

Week 2 (27th - 31st March 2017)					
	23 rd March 2017	23 rd March 2017	23 rd March 2017	23 rd March 2017	23 rd March 2017
Time	Monday	Tuesday	Wednesday	Thursday	Friday
0800 to 0900	<u>LGIS</u> Errors of Refraction Dr. Bushra	<u>LGIS</u> Congenital Anomalies of Eye Dr. Shakil	<u>LGIS</u> Glaucoma Dr. Bushra	<u>LGIS</u> Color Vision Dr. Munir Amjid	<u>SDL</u>
0900 to 1000	<u>LGIS</u> Biochemical Role of Vitamin -A Prof. Alam Khan/Dr. Zahid	Annual Sports Week 2017 28th – 31st March 2017			
1000 – 1030 hrs					
1030–1230 hrs	<u>PBL-2A</u> Prof. Ayub & Team-2				
1230-1330 hrs	<u>DSL</u> Errors of Refraction				
1330 – 1400 hrs Lunch and prayer break					
1400 – 1600 hrs	<u>SDL</u>				

AJK Medical College Muzaffarabad

SPS Module (2nd Year)

Week 3 (03th – 07th April 2017)					
	03th April 2017	04th April 2017	05th April 2017	06th April 2017	07th April 2017
Time	Monday	Tuesday	Wednesday	Thursday	Friday
0800-0900hrs	College Holiday		<u>Assessment</u> <u>MFS</u> <u>Module (0111)</u>	<u>IPA</u>	<u>LGIS</u> Diseases of Eye/ Trauma Col. Dr Jawwad
0900-1000hrs					<u>LGIS</u> Photochemistry of Vision Prof. Alam Khan
1000 – 1030 hrs					
1030–1130 hrs	College Holiday		<u>Dissection</u> -Inner layer of Eye -Blood Vessels and Nerves of Eye ball Team- 1 Wrap up Dr. Asad	<u>IPA</u>	<u>Skill Lab</u> 1-50: Visual field and perimetry Dr. Munir Amjad Baig 51-100: Ophthalmoscopy and funduscopy After 1 hour swap the groups Dr. Bushra
1130-1230 hrs					
1230-1330 hrs			<u>LGIS</u> Developmental Anomalies of Eye and its Management Col. Dr Jawwad	PBL-2B Team-2 Dr Ijaz Anwar	
1330 – 1400 hrs Lunch and prayer break					
1400 – 1600 hrs	College Holiday		<u>Practical</u> Histology Lens, Iris, Ciliary body	<u>Skill Lab</u> 1-50: Color Vision Dr. Munir Amjad Baig 51-100: Clinical Methods in Eye Dr. Bushra After 1 hour swap the groups	<u>DSL</u> Night Blindness & Color Blindness

AJK Medical College, Muzaffarabad

Schedule for SPS Module – (2nd Year)

Week 4 (10th – 14th April 2017)

	April 10, 2017	April 11, 2017	April 12, 2017	April 13, 2017	April 14, 2017
Time	Monday	Tuesday	Wednesday	Thursday	Friday
0800 - 0900	<u>Dissection</u> Anatomy of External and Middle Ear, Ossicles, Facial Nerve course in ear Team-1	<u>LGIS</u> Common symptoms and diseases of Ear their effects on life Dr. Farooq Kiyani	<u>LGIS</u> Nasal Obstruction Dr. Farooq Kiyani	<u>LGIS</u> Deafness and its management Dr. Tehniat	<u>LGIS</u> Cochlear microphonics Dr. Ijaz Anwar
0900 - 1000		<u>LGIS</u> Development of Ear & its congenital Anomalies Dr. M Shakil Sadiq	<u>PBL – 3B</u> Team 2 Dr. Farooq Kiyani	<u>LGIS</u> Olfaction and Visceral Functions Dr. Fauzia	<u>Practical</u> Histology Olfactory epithelium
1000 - 1030	Break				
1030 - 1130	<u>SGD</u> Role of External, Middle and Inner Ear in Hearing Team 2 Dr. Ijaz Anwar	<u>SGD</u> Anatomy of inner Ear Bony & Membranous Labyrinth, Semicircular Canals Team 1 Dr. Asad / Dr. Shakil	<u>LGIS</u> Bone Mineral Homeostasis Dr. Zahid Azeem	<u>LGIS</u> Physiology of Balance Dr. Ijaz Anwar	<u>Skills Lab</u> Otoscopy and Tuning Fork Tests Team 2 Dr. Fauzia
1130 - 1230			<u>Practical</u> Histology Cochlea	<u>Practical</u> Histology Taste buds	
1230 - 1330	<u>LGIS</u> Physiology of Hearing Dr. Ijaz Anwar	<u>LGIS</u> Chemistry of Hearing Dr. Zahid Azeem			<u>DSL</u> Vertigo and Tinnitus
1330 - 1400	Break				
1400 - 1500		<u>SGD</u> Formation, Circulation and Distribution of Perilymph and Endolymph Team 2 Dr. Ijaz Anwar	<u>SGD</u> Pathways of Hearing and balance Team 2 Dr. Fauzia	<u>SGD</u> Pathways of Olfaction and Taste, and their abnormalities Team 2 Dr. Fauzia	<u>SDL</u>
1500 - 1600	<u>PBL – 3A</u> Team 2 Dr. Fauzia				



Inquires & trouble shooting
Dr. Muhammad Ayub Awan
Associate Dean Medical Education,
AJK Medical College, Muzaffarabad, Azad Kashmir, Pakistan
ayub@ajkmc.edu.pk
Tel: +5822-920527-8/808, 816, Fax: +92-5822-920523