Short Specification

Objectives (Main Outcomes)

1. Summary of the main learning outcomes for students enrolled in the course.

a. To know the basic ophthalmic anatomy and physiology.
b. To recognize assessment and management of common ophthalmic diseases.
c. To know how to handle common ophthalmic emergencies.
d. To handle simple ophthalmic diagnostic instruments.
e. To be aware of common ophthalmic operations.
f. To communicate ethically with patients and their families
g. To work in group with colleagues
h. To use different tools of modern communication

Course Description (Note: General description in the form to be used for the Bulletin or Handbook should be attached)

1. Topics to be Covered

Topics	No of Weeks	Contact hours
Please see topics listed below	**6 weeks**	**See description below**

Theoretical and Practical Activities in **Ophthalmology Course 432:**

ACTIVITIES	OUTLINE
I. Theoretical Activities	**1. Lectures**
II. Practical Activities	**1. Clinical skill sessions:** **Main objectives** - To train and supervise a small group of students to master certain clinical skills, and to handle simple ophthalmic instruments - Examine the eye and periocular adnexa with proper note keeping
	2. Clinics: **Main objectives** - Examination for selected patients. - Assessment and planning management of Ophthalmic patients.
	3. Ophthalmic Emergency Room: **Main objective** - Observe the approach and management of a verity of ophthalmic emergencies.
	4. Operation Room: **Main objective** - Discussion of common indications, procedures and possible complications of common ophthalmic Surgeries.

LECTURE CONTENTS / OUTLINE

CREDIT HOUR	TOPIC DESCRIPTIONS
2 Hours	**History taking and physical examination in ophthalmology** a. The parts of ophthalmic history b. The basic relation of eye and different part of body b.1 Vascular neurological relations c. The basic of comprehensive ophthalmic evaluation including an analysis of the physiologic function and anatomic status of the eye, visual system, and related structures.

2 Hours	**Basic Anatomy and Physiology of the Eye** a. Very brief embryology b. Anatomy of orbit, extraocular muscles, eyelid and lacrimal system c. Anatomy of visual pathway d. Anatomy of eye (globe) e. Physiology of eye e.1 Vision e.2 Intraocular pressure
2 Hours	**Lid, Lacrimal, and Orbit Disorders** a. Lid disorders a.1 Blepharitis a.2 Entropion a.3 Ectropion b. Lacrimal apparatus disorders b.1 lacrimal duct obstruction, b.2 lacrimal gland tumors c. Orbital cellulitis c.1 etiology c.2 management d. Inflammatory orbital disorders d.1 Trauma & Orbital tumor
2 Hours	**Ocular emergencies and red eye** a. Ocular Emergency a.1 Definition a.2 Classification a.2.1 According to onset (Sudden or Gradual) a.2.2 Laterality (One or both Eyes) a.3 Symptoms and signs a.4 Types a.5 Causes a.6 Management b. Red Eye b.1 Definition b.2 Causes b.2.1 Ocular b.2.a. Serious b.2.b. Non Serious b.2.2 Systemic b.3 Clinical Presentation b.4 Management

2 Hours	**Strabismus, Amblyopia and Leukocoria** a. Strabismus a.1 Definition a.2 Extra ocular muscles, innervations and function a.3Types of ocular deviation (concomitant and non-concomitant) a.4Adaption: abnormal head position, suppression, amblyopia a.5 Association of strabismus a.6 Therapy b. Amblyopia b.1 Definition b.2 Visual development b.3 Predisposing factor b.4 Presentation, detection and management c. Leukocoria c.1 definition c.2 causes c.3 management
2 Hours	**Acute Visual Loss** a. Acute glaucoma a.1 causes a.2 clinical manifestation a.3 management b. Retinal artery and vein occlusion b.1 causes b.2 clinical manifestation b.3 management c. Retinal detachment c.1 Classification c.2 Causes c.3 Clinical manifestation c.4 Management d. Uveitis d.1 Causes d.2 Clinical manifestation d.3 Management e. Keratitis e.1 Causes e.2 Clinical manifestation e.3 Management

2 Hours	**Chronic Visual Loss** a. Chronic glaucoma a.1 causes a.2 Types a.3 Management b. Senile cataract c. Diabetic macular edema d. Age Related Macular Degeneration (ARMD)
2 Hours	**Refractive Errors** a. Basics of optics b. Concept of accommodation c. Types of refractive errors c.1 myopia, hyperopia, and astigmatism c.2 Causes c.3 Clinical manifestation. d. Presbyopia d.1 Definition d.2 Management) e. Anisometropia f.1 Definition f.2 Management f. Optical correction (e.g. glasses, contact lenses) g. Surgery for refractive errors
2 Hours	**Ocular manifestations of systemic diseases** a. Endocrine disorders (e.g. diabetic retinopathy) b. Cardiovascular disorders (e.g. hypertensive retinopathy) c. Skin and connective tissue disorders d. Infectious and inflammatory disorders (tuberculosis) e. Hereditary and hematopoietic disorders
2 Hours	**Neuro-ophthalmology** a. Afferent system disease a.1 Anatomy a.2 Examination a.3 Diagnoses a.4 Tests b. Efferent System Disease b.1 Anatomy b.2 Examination b.3 Diagnoses b.4 Tests c. Other c.1 Unusual faces c.2 Unusual neuro-imaging c.3 Unusual postures c.4 Dysmorphism

2 Hours	**Ocular Pharmacology and Toxicology** a. General pharmacological principles of ocular drugs b. Ocular pharmacotherapeutics b.1 Cholinergic agonists and antagonists b.1 Anti inflammatory drugs c. Ocular toxicology c.1 Complications of topical administration c.2 Ocular reaction to systemic drugs

CLINICAL SKILL SESSIONS CONTENTS / OUTLINE

CREDIT HOUR	TOPIC DESCRIPTIONS
2-hours	**External Ocular Examination, Ocular Motality and Alignment** a) External ocular examination - inspection of head and face (skin, bones, lymph nodes, etc.) - evaluation of eyelids, orbit, and globe (e.g. ptosis, proptosis) - using torch to judge corneal clarity and lustre, assess anterior chamber depth, and appreciate cataract - how to evert upper eyelid for examining the palpebrale conjunctiva b) Ocular motality and alignment - motality and strabismus terminology - function of extraocular muscle - ocular motility examination (ductions and versions) - tests of binocularity and fusion including stereopsis - tests of alignment including corneal light reflection test, and cover test
2-hours	**Visual acuity and Ophthalmoscopy** a) Visual acuity - concept of visual acuity - measurement notations and abbreviations - test targets - visual acuity measurement (far and near) - pinhole acuity test b) Ophthalmoscopy - use of direct Ophthalmoscope to assess the red reflex and detect its abnormalities. Also to examine and comment on retinal and disc condition. - brief about indirect ophthalmoscope
	Visual field, Tonometry, Pupill Examination a) Visual field - overview of visual pathway - basics of confrontation field testing - common field defects - localizing field defects

2-hours	b) Tonometry - intraocular pressure measurement conventions and population means - types of tonometers (Goldmann application tonometers, tonopen, etc) c) Pupill examination - general pupillary observation - light-reflex test - swinging flashlight test - near-reflex test - relative afferent pupillary defect

5. Schedule of Assessment Tasks for Students During the Semester

Assessment	Assessment task (eg. essay, test, group project, examination etc.)	Week due	Proportion of Final Assessment
1	MCQ	5th week	40 %
2	OSCE	6th week	60 %

Learning Resources

1. Required Text(s)

a. Lecture notes Ophthalmology (latest edition)
By: Bruce James (published by Blackwell Science)
b. Basic Ophthalmology (latest edition)
By: Cynthia A. Bradford (published by American Academy of Ophthalmology)
c. Practical Ophthalmology: A manual for Beginning Residents (latest edition)
By: Fred M. Wilson (published by American Academy of Ophthalmology

2. Essential References

a. Vaughan and Asbury's general Ophthalmology (latest edition)
By: Paul Riordan-Eva (published by LANGE)

3. Recommended texts and reference materials

a. Clinical Ophthalmology: A Systematic Approach (latest edition)
By: Jack T. Kanski (published by Butterworth Heinemann)
b. Ophthalmology, Archive journal of Ophthalmology, American journal Ophthalmology, British journal of Ophthalmology

4. Electronic Materials, Web Sites etc

a. Department internet website.
b. Department's teaching staff personal websites on University site.
c. University and KAUH Library.
d. Audiovisual Unit of the Ophthalmology Department.
e. PubMed
f. Medscape
g. The digital journal of ophthalmology (www.djo.harvard.edu)

5. Other learning material such as computer-based programs/CD, professional standards/regulations

a. CD's and materials prepared by seminar, workshops and conferences conducted by Ophthalmology department, which are available in the Audiovisual Unit of Ophthalmology Department.