# KERALA UNIVERSITY OF HEALTH SCIENCES THRISSUR – 680 596, KERALA



# MASTER OF OPTOMETRY (M.OPTOM)

# **CONTENTS**

- 1. Introduction
- 2. Objectives of the program
- 3. Scope of the program
- 4. General information
- 5. Scheme of examination for the first year Master Of Optometry (M.optom)
- 6. Staff Pattern
- 7. Structure Content & Organization

## PROPOSED REGULATION, SCHEME AND SYLLABUS (Two Year Course)

# **1. INTRODUCTION**

Optometry is one of the most sought after profession in allied health. It is an independent specialty focusing on the diagnosis and non-surgical management of disorders of the eye and visual system.

According to **world council of Optometry** – the supreme governing body - Optometry is a healthcare profession that is autonomous, educated, and regulated (licensed/registered), and optometrists are the primary healthcare practitioners of the eye and visual system who provide comprehensive eye and vision care, which includes refraction and dispensing, detection/diagnosis of disease in the eye, and the rehabilitation of conditions of the visual system.

Master's program in Optometry is designed to produce graduates of high standards in research who are equipped with appropriate skills to meet the challenges and problems of primary eye care in a selected specialization. The curriculum has been designed after a detailed evaluation of the pattern followed by different International Schools of Optometry and considering the current eye care needs of India.

## 2. OBJECTIVES OF THE PROGRAM

- Enhance knowledge from clinical experience, interactions & Discussions and research to improve the quality of training and education in Optometry
- Explore a specialized field in depth and develop high degree of expertise to contribute to advancement of knowledge in Optometry.
- Develop teaching and presentation skills necessary to become efficient teachers utilizing state-of-the art facilities and equipment's
- Build up leadership qualities in education, practice and administration
- Contribute to emerging and vitally important industry through research.

### 3. SCOPE OF THE PROGRAM

Acquiring a Masters in Optometry will offer the candidate a confident platform to; Practice Optometry independently

- Become primary eye care service provider in Eye hospitals/clinics
- Earn key posts in academic institutions including teaching and research
- Military and public health service
- Offer clinical services to multinationals dealing with manufacturing and distribution of ophthalmic lenses, Low Vision Devices, Contact lenses and Ophthalmic Instruments.

# MASTER OF OPTOMETRY (M.OPTOM)

(Proposed Regulation, Scheme and Syllabus of the Post Graduate Degree of Master of Optometry)

# 4. General Information

#### Name of the Course

The name of the course shall be "Master of Optometry" – M.Optom

#### Eligibility for the course

Bachelor of Optometry from Kerala University of Health Sciences or a degree in Bachelor of Optometry pursuing four years regular programme from any other Universities which is equivalent to degree of B.Sc. Optometry from Kerala University of Health Sciences with a minimum of 60% marks.

## Mode of Selection

The selection of students for the course shall be made strictly on merit as decided by the Gov. of Kerala/Kerala University of Health Sciences

## **Duration of the Course**

The program shall be for 2 academic years (Full time)

#### **Medium of Instruction**

	Eng	glish				
r	lumber o	of Seats				
	As	per universit	y norms			
A	Attendanc	ce				
	The	e candidate s	hould have a minimum attendan	ce of 80%	in both th	eory and
		clinics separ	ately in each academic year, faili	ing which	the studen	t will not
		be permitted	l to appear for the University Exa	mination	of the subj	ect.
	The	ere will not	be any Condonation of attendar	nce for PG	course as	s per the
		university ru	lles			
ľ	ligration	and transfe	r			
	o Mig	gration and t	ansfer will not be permitted duri	ing the cou	irse of stuc	ly.
Prog	gram Titl	e :	Master of Optometry (M.Opton	n)		
Dur	ation	:	Two years of academic program.			
Mod	e of Study	y :	Full Time Program			
	5. SCH	IEME OF EX	<b>XAMINATION FOR THE FIRS</b>	Г YEAR М	IASTER (	)F
			<b>OPTOMETRY (M.OPTOM)</b>			
The	candidate	shall appear f	for the following theory examination	ons.		
	1. Adv	vanced Conta	ct Lens Studies - I (Paper-I)			
	2. Lov	w Vision and	Rehabilitation (Paper-II)			
	3. Pae	diatric Opton	netry (Paper-III)			
	4. Occ	cupational Op	tometry & Public health Optometr	y (Paper-IV	V)	
	5. Res	search method	lology & Biostatistics (Paper-V)			
SL	Subject		UNIVERSITY	INTERNAL ASSESSMENT		Total
SL No	Subject	Theory	Practical/viva	Theory	Practical	
4						

				Prac	tical	vi	va	То	tal			/ Viva		
		Min	Ma	Mi	Ma	Mi	Ma	Mi	Ma	М	Ma	Mi	Μ	
1	Paper – I	40	<b>x</b> 80	<b>n</b> 15	<b>x</b> 30	n -	<b>x</b> 20	<b>n</b> 25	<b>x</b> 50	in 8	<b>x</b> 20	<b>n</b> 20	<b>ax</b> 50	200
2	Paper –	40	80	15	30	_	20	25	50	8	20	20	50	200
	II		00	10	20				00	Ũ			00	200
3	Paper –	40	80	15	30	-	20	25	50	8	20	20	50	200
	III													
4	Paper – IV	40	80					-	-	8	20			100
5	Paper –	40	80							8	20			100
5	V	10	00							0	20			100
					GRAN	D TO	TAL							800
		l Clubs,	, Case					-						inations, Teaching
C	linical pos	tings –	1 <sup>st</sup> Ye	ar M.(	Opton	ı			700	Hrs.				
	SCHEN	ME OF	EXA				R THI XY (M			) YE	AR N	IAST	ER C	)F
The	candidate	shall a	ppear	for t	he foll	owing	g theo	ry exa	amina	tion	S			
	Advanced		• •				Pape							
	Ocular Dise						Pape	-						
	Clinical Im			1			Pape							
	Dissertatio						Pape							
				UN	IVERS	SITY				A		RNAL SMEN	Т	
SI					Pr	actical	/viva					Pract Viva/ rtatio	/Disse	
5														

No	Subje ct	The	eory	Disse	tical/ ertati on	vi	va	То	tal	The	eory	ogboo urnal club// rated teach emina	Integ ing/S	Total
		Mi	Ma	Mi	Ma	Min	Ma	Mi	Ma	Mi	Ma	Mi	Ma	
		n	Х	n	Х		Х	n	Х	n	Х	n	X	
1	Paper – I	40	80	15	30	-	20	25	50	8	20	20	50	200
2	Paper – II	40	80	15	30	-	20	25	50	8	20	20	50	200
3	Paper – III	40	80	-	-	-	-	-	-	8	20	-	-	100
4	Paper – IV	-	-	35	70	-	30	50	100	-	-	40	100	200
		-	-	-	G	RAND '	TOTAL	4	-	-	-	-	-	700

\*The internal assessment of dissertation work will be done by the respective project guide based on the quality of work and submission of dissertation.

 Internal assessment will be based on the performance in written examinations, Logbook, Journal Clubs, Case Presentations, Seminars, Assignments & Teaching Learning activities.

Clinical postings	700 Hrs.

- It is mandatory to pass in all the papers of 1<sup>st</sup> year in order to appear for the 2<sup>nd</sup> year M. Optom examination. The candidate who fails in one or more paper in 1<sup>st</sup> year M. Optom examination will have to pass in that/those papers in the supplementary examination/s to be eligible to appear for the final year University Examination.
- A candidate must obtain 40% of marks in internal assessment to be eligible to write the university examination. The class average of internal assessment marks should not exceed 75%.

#### Grading System

The grading system is as follows

•	Distinction	– 75% and above

- **First Class** 65% and above below 75%
- Second Class 50% and above below 65%

Pass

#### > Award of the Degree

• The candidate shall be awarded the Degree of Master of Optometry (M.OPTOM) only on completion of the two years course and on successfully passing the final year examinations as per the University requirements.

## 6. STAFF PATTERN

SI.No.	Description	Nos.	Specification
1.	Course Director	1	M.S. Ophthalmology with 06 years of
			MS/DNB teaching Experience or
			M.Optom, PhD/MSc Optometry, PhD with
			06 years Post Graduate teaching
			Experience or M.Optom/MSc Optometry
			With 10 years Post Graduate teaching
			Experience.
2.	Prof.& Head	1	M.S. Ophthalmology with 04 years of
			MS/DNB teaching Experience or
			M.Optom, PhD/MSc Optometry, PhD with
			04 years Post Graduate teaching
			Experience or M.Optom./MSc Optometry
			With 08 years Post Graduate teaching
			Experience.
3.	Associate Prof.	2	M.S. Ophthalmology with 03 years
			teaching Experience or M.Optom,
			PhD/MSc Optometry, PhD with 03 years
			teaching Experience or M.Optom./MSc
			Optometry with 05 years teaching
			Experience
4.	Asst. Prof.	2	M.Optom, PhD/MSc Optometry, PhD or
			M.Optom. with 02 years teaching
			Experience
5.	Lecturer	2	M.Optom/MSc Optometry. or
			B.Optom./B.Sc. Optometry with 05years
			teaching Experience
6.	Assistant	1	B.Optom/BSc Optometry
	Lecturer/Clinical		
	Instructor		
7.	Lab Assistants	2	Diploma in Optometry/Ophthalmic
			Assistant
All th	e above degree should	he from	universities recognized by KUHS

• The teacher student ratio shall be 1:5

Teachers at the level of Assistant Professor and above shall guide the students

The teacher student ratio for dissertation guidance shall be 1:4

•

•

# 7. STRUCTURE, CONTENT & ORGANIZATION

# **MASTER OF OPTOMETRY (M.OPTOM)**

# **FIRST YEAR**

#### PAPER – I – ADVANCED CONTACT LENS STUDIES – I

This part has been designed to refresh the contact lens basics the student has completed during their undergraduate level. The objective of this particular module is to cement the basics before they move to the advanced level.

Unit	Торіс	Number
	Topic	
NO:		of Hours
1.	Relevant Anatomy, Physiology & Biochemistry for Contact	07
	Lens management	
2.	Contact lens material properties and fitting	10
	characteristics	
3.	Different contact lens designs and modifications	10
4.	Contact Lens care and maintenance	06
5.	Clinical grading scales and documentation	06
6.	Instrumentation	20
7.	Corneal refractive procedures	10
8.	Contact Lens practice management	06
9.	Contact lens complications & Management	15
10.	Contact Lens related ocular microbiology & Immunology	10
	Total	100 Hrs

#### **Objectives of Clinical Practicum:**

- Prefitting evaluation
- Instrumentation
- Fitting
- trouble shooting of contact lenses

Practical training has to be completed during the clinical postings in Contact lens clinic.

#### **Reference Books:**

Contact Lens: Anthony.J.Philips, Janet Stone

IACLE – Contact lens modules (10 Nos) International Association of Contact Lens

Educators

Contact lens practice: Nathan Efron

Clinical manual of Contact Lenses - E S. Bennett ,V A Henry

#### PAPER - II - LOW VISION AND REHABILITATION

This area has been designed to refresh the knowledge the student acquired in the undergraduate level about Low Vision and various devices used on patient management along with the comprehensive management of various low vision conditions and rehabilitation modalities of patients with visual impairment.

Unit NO:	Торіс	Number of Hours
1.	Epidemiology of vision impairment and vision classification systems	02
2.	Causes of Low vision	05
3.	Case history & Clinical Assessment of Low vision patients	03
4.	Low vision devices (Optical, Non-optical & electronic)	05
5.	Children with Low vision	05
6.	Management of Low Vision Specialty cases	05
7.	Understanding the visual rehabilitation services	
8.	Assessing the functional skills of the patient	
9.	Rehabilitation case history	
10.	Preparation of Rehabilitation plan	
11.	Vocational and educational guidance	
12.	Training and instructions to use Optical / non-optical low vision devices	25 Hrs
13.	Training for daily living skills	1
14.	Documentation and report preparation	
15.	Setting-up of Rehabilitation services in an eye care Centre	
	Total	50 Hrs

#### **Objectives of Clinical Practicum:**

- Low vision case history & clinical examination
- Instrumentation & Trial of devices
- Prescription of aids and Rehabilitation.

Practical training has to be completed during the clinical postings in Low vision clinic.

#### **Reference Books:**

Essentials of Low Vision - Richard L, Brilliant OD

Clinical Low Vision - Elenor E. Faye

#### PAPER – III – PAEDIATRIC OPTOMETRY

This module is designed to increase the student's understanding about human visual development, its defects and evaluation of Paediatric age groups. Completion of this module ensures the student a sound knowledge in evaluation and problem solving techniques of pediatric population.

Unit	Торіс	Number of
NO:		Hours
1	Anatomical and functional aspects of visual	05
	development	
2	Abnormal development of vision	05
3	Methods to assess the development of visual functions	05
	in infants	
4	Limitations of the currently available techniques	02
5	Common genetic problems in pediatric age group	05
6	Diseases of the orbit and anterior segment	05
7	Disease of the posterior segment and neuro-	06
	ophthalmological disorders	
8	Ocular manifestation of systemic disorders	03
9	Case history, Clinical examination and assessment	10
	formats of pediatric patients	
1	Pediatric dispensing – Spectacles and contact lenses	04
	Total	50 Hrs.

#### **Objectives of Clinical Practicum:**

- Pediatric case history & evaluation
- Visual acuity assessment with different acuity charts & Refraction
- Pediatric dispensing

Practical training has to be completed during the clinical postings in Pediatric Clinic

#### **Reference Books:**

- 1. Pediatric Ophthalmology and Strabismus Kenneth W. Wright MD
- 2. Principles and Practice of Pediatric Optometry David Rosenbloom
- 3. Binocular Anomalies: Diagnosis and Vision Therapy Griffin, John R.

#### PAPER – IV – OCCUPATIONAL OPTOMETRY & PUBLIC HEALTH OPTOMETRY

This part deals a number of topics related to Occupational as well as public health Optometry at a higher level than in the undergraduate level. The module helps to understand the importance of Optometry contribution needed in occupational as well as public health areas along with clinical practice.

Unit NO:	Торіс	Number of
		Hours
1.	Visual and general ergonomics	04
2.	Anthropometry	03
3.	Computer Vision Syndrome and management	12
4.	Sports vision	05
5.	Physical & Chemical Hazards, Radiation effects	80
6.	Visual fitness & Legal aspects	02
7.	Optometry's role in healthcare system – In India &	03
	Comparison with other countries	
8.	Epidemiology of occupational eye diseases & Injuries	04
9.	Occupational eye disease management	04
	Total	45 Hrs.

#### **Reference Books:**

- 1. Environmental Vision : Interactions of the Eye, Vision, and the Environment -Donald G. Pitts, Robert N. Kleinstein
- 2. Work and the eye : Rachel V. North
- 3. Sports vision: vision care for the enhancement of sports performance -Graham B. Erickson
- 4. Elite Sports and Vision : Ajay Kumar Bhootra, Sumitra
- 5. Basics of Computer Vision Syndrome : Ajay Kumar Bhootra

#### PAPER - V - RESEARCH METHODOLOGY & BIOSTATISTICS

Unit No:	Topics	Number of Hours
1.	Introduction I : Biostatistics > Definition	04

	Role of statistics in health science and health care delivery system	
2.	Introduction II : Research Methodology <ul> <li>Research Process</li> <li>Steps involved in research process</li> <li>Research methods &amp; methodology</li> </ul>	04
3.	<ul> <li>Variables and scales of measurements</li> <li>Definitions and examples of qualitative, quantitative, continuous, discrete, dependent and independent variables.</li> <li>Definitions, properties and examples of nominal, ordinal, interval and ratio scales of measurements.</li> </ul>	07
4.	<ul> <li>Sampling</li> <li>Population, sample, sampling, reasons for sampling, probability and non-probability sampling.</li> <li>Methods of probability sampling - simple random, stratified, systematic, multi-phase, multi stage procedure</li> <li>Errors in Sampling</li> <li>Merits and demerits.</li> <li>Use of random number table</li> </ul>	07
5.	Organization of data <ul> <li>Frequency table, histogram, frequency polygon,</li> <li>frequency curve, bar diagram, pie chart</li> </ul>	06
6.	Measures of location <ul> <li>Arithmetic mean, median, mode, quartiles and</li> </ul>	

	percentiles – definition	
	Computation (for raw data), merits, demerits and applications	05
	Measures of variation	
7.	<ul> <li>Range, inter-quartile range, variance, standard deviation, coefficient of variation – definition</li> </ul>	05
	<ul> <li>Computation (for raw data), merits, demerits and applications</li> </ul>	05
	Probability Distribution	
	<ul> <li>Normal distribution, Binomial distribution, Poison distribution – importance, uses merits &amp; demerits</li> </ul>	
8.	<ul> <li>Concept, graphical form, properties, examples</li> <li>Concept of Skewnes and Kurtosis</li> </ul>	05
	Concept of Skewnes and Kurtosis	
	Correlation and regression	
	<ul> <li>Scatter diagram</li> </ul>	
9.	<ul><li>Correlation &amp; Regression</li></ul>	05
	<ul><li>Concept and properties of correlation coefficient</li></ul>	
	Regression basic concepts	
	Vital statistics and Hospital statistics	
10.	<ul> <li>Rate, ratio, proportion, Incidence, Prevalence, Common morbidity, mortality and fertility statistics – Definition &amp; computation</li> </ul>	05
11.	Test of significance & Estimation	
	<ul> <li>Null hypothesis, Alternate hypothesis, Procedure,</li> </ul>	

	standard error, level of significance.	05	
	Estimation basic concepts, interval estimation, population mean & proportion.		
	Chi-square test		
12.	<ul> <li>Applications of chi-square test</li> </ul>	04	
	Extension of 2 X 2 table		
	Analysis of Variance (ANOVA)		
	Non-parametric Tests		
13.	Uses, Advantages & Disadvantages of non-parametric tests	04	
14.	Concept of reliability & validity (evaluation of diagnostic tests)	03	
	Epidemiology		
	<ul><li>Concept of health and disease</li></ul>		
15.	Definition and aims of epidemiology	05	
	Descriptive Epidemiology – method and uses		
	<ul> <li>Case report, Case series, Cross-sectional study, Case control study, Cohort study</li> </ul>		
16.	Sample size determination	03	
17.	Format of scientific documents	03	
	Total Hours	80	

#### **Reference Books:**

- 1. Introduction to Biostatistics & Research :- P.S.S Sundar Rao & R. Richard
- 2. Research Methodology :- C. R Kothari
- **3.** Methods of Biostatistics :- B.K Mahajan

# **MASTER OF OTPOMETRY (M.OPTOM)**

# **SECOND YEAR**

#### PAPER -I - ADVANCED CONTACT LENS STUDIES - II

This course provides an opportunity for acquiring advanced clinical knowledge and skills in speciality contact lens practice. Emphasis will be given on contact lens fitting and trouble shooting in speciality cases mentioned below. The teaching – learning of this module is by expert lectures and clinical posting with specialized contact lens practice.

Unit NO:	Торіс	Number of		
		Hours		
1.	Keratoconus and its various management options	07		
2.	Post refractive surgery contact lens fitting (Post	10		
	LASIK, Post PKP, Post RK etc)			
3.	Contact lens for children and babies	08		
4.	Therapeutic Contact Lenses	06		
5.	Extended & Continuous wear lenses	05		
6.	Presbyopia & contact lenses	06		
7.	Aphakic Contact Lenses	05		
8.	Toric Contact Lenses	06		
9.	Tinted and cosmetic contact lenses	05		
10.	Contact lenses for color vision defects	02		
11.	Orthokeratology	10		
12.	Scleral Lenses	05		
	Total	100 Hrs.		

✓ Current issues, Contact lens research and future directions of every aspects of contact lens practice have to be covered along with each topic.

#### **Objectives of Clinical Practicum:**

#### • Fitting & Trouble shooting of specialty contact lenses

Practical training has to be completed during the clinical postings in Contact lens clinic

#### **Reference Books:**

- 1. Contact Lens: Anthony.J.Philips, Janet Stone
- IACLE Contact lens modules (10 Nos) International Association of Contact Lens Educators
- 3. Contact lens practice: Nathan Efron
- 4. Clinical manual of Contact Lenses E S. Bennett ,V A Henry

## PAPER – II – OCULAR DISEASES AND THERAPEUTICS

This course covers the Pathophysiology and management (Therapeutic & Surgical) of eye diseases that affects both anterior and posterior segments (more stress on anterior segment diseases). This knowledge is necessary to understand the process involved in the pathophysiology of commonly encountered eye diseases in the Optometric, contact lens as well as Low vision practice. This ultimately helps the student to detect the problem, deliver the primary care if needed and refer the needy to appropriate specialists for further management.

Unit NO:	Торіс	Number of Hours		
1.	Anterior segment pathologies & Management			
	Lids, Orbit & Adnexa			
	Conjunctiva			
	Cornea			
	Sclera & Episclera			
	Lens	30		
	Uvea			
	Lacrimal disorders			
2.	Corneal refractive surgeries and management of			
	cataract – Techniques / Outcomes	10		
3.	Vitreous, macular, Optic nerve and retinal vascular			
	disorders	15		
4.	Ocular emergencies – primary care approach	05		
5.	Glaucoma – Diagnosis & Management	10		
	Total	70 Hrs.		

• Comprehensive anterior & posterior segment evaluation.

Practical training has to be completed during the clinical postings

## Reference Books:

1. Parsons Diseases of the Eye - Stephen J. Miller

- 2. Clinical Ophthalmology: A Systematic Jack J. Kanski
- 3. Ophthalmology Myron Yanoff and Jays Duker

## PAPER - III - CLINICAL IMAGING

This course will provide candidates with a working knowledge of clinical photography of adnexa and anterior segment of eye by still and video-photography along with the anterior and posterior segment imaging equipments.

Unit NO:	Торіс	Number	
		of Hours	
1.	Ethical & Legal issues related to photo documentation		
2.	Instrumentation and lighting requirements		
3.	Interfacing of Ophthalmic instruments with various		
	imaging devices		
4.	Image analysis, editing, Processing and database	10	
	management		
5.	Use of imaging in patient management, education and		
	communication with other clinicians		
6.	Anterior segment imaging devices – Topography,	20	
	Anterior OCT, Confocal Microscope, SL photography,		
	Glaucoma diagnostic equipment's and recent advances		
7.	Posterior segment imaging devices – FFA & ICG, OCT, B-	10	
	Scan & Electro diagnostics and recent advances.		
	Total	40 Hrs.	

 $\checkmark$  Hands on training with clinical imaging equipment's has to be conducted

## **Reference Books:**

- Corneal topography in the wave front Era A guide for clinical application -M. Wang
- 2. James Wolffsohn : Eye Essentials Ophthalmic Imaging,

- 3. Roger Steinert MD, David Huang : Anterior Segment Optical Coherence Tomography
- 4. Optical Coherence Tomography: Principles and Applications Mark Brezinski
- 5. Wavefront analysis aberrometers and corneal topography Benjamin F.Boyd
- 6. Ophthalmologic Ultrasound, An Issue of Ultrasound Clinics Arun D.Sing

### <u> PAPER – IV – DISSERTATION</u>

The candidate should carry out the Dissertation in any of the fields viz; Contact

lenses, Low vision aids, Pediatric optometry and occupational optometry. The candidate shall work under the supervision of his/her guide.

The candidate shall start the Dissertation work, 6 months after commencement

of the first academic year.

Dissertation shall be submitted to the University with the following

specifications:

Font size: 12

Font type: Arial.

Spacing: Double.

Print: Black.

Paper Size: A-4 size Bond Paper.

Binding: Rexin and title to be embossed

- The candidate shall submit the Dissertation to the University one month prior to the final year University Examinations.
- The candidate shall be allowed to appear for the final year University Examination subject to submission of his / her dissertation.
- The candidate shall present the Dissertation in the final year University Examination.

# LEARNING AND TEACHING STRATEGY

An important aim of the program is to develop an autonomous and reflective primary eye care practitioner who is also able to recognize the importance of lifelong learning both from a personal and professional viewpoint. Students are encouraged to explore the recent advances in the field of Optometry and apply it in the clinical practice through problem trouble shooting, analytical and evidence based approach to study.

The learning & teaching methods include

- ➢ Lectures
- Demonstrations
- Clinical patient management
- Independent collaborative self-study
- Assignments/ Projects
- ➢ Seminars
- Case presentation
- Discussions
- > Industrial visits & External clinical placements
- Journal Clubs
- Classroom teaching with the undergraduate students

# **CLINICAL POSTINGS**

#### Aim:

To enable students to learn Optometric assessment process, clinical reasoning skills & treatment techniques so that they become competent professionals

#### Description:

In the first year of the curriculum the students are posted on a rotatory basis in different clinical units of Ophthalmology, Contact lenses, Low vision aids & Pediatric clinic. The students will be under the supervision of experienced clinical supervisors in the specialty areas. During the second year, the students are placed for one month in outside eye institutes or clinical establishments for observer ship.

#### CLINICAL OBJECTIVES:

- 1) Evaluation of the patient
- 2) Plan and implementation of treatment plan.
- 3) Administration of standardized evaluation tools.
- 4) Documentation of evaluation and progress reports.
- 5) Clinical discussion with the undergraduates.
- **6)** Case presentation and discussion.

#### (Annexure)

#### FORMAT OF MASTER OF OPTOMETRY DISSERTATION

- 1. Abstract
- 2. Introduction
- 3. Aim & Objectives
- 4. Review of Literature
- 5. Materials & Methodology
- 6. Results
- 7. Discussion
- 8. Conclusion
- 9. Bibliography
- 10. Appendices

# (Page 1) TITLE OF THE STUDY



Month & Year of Submission

Name of the Candidate

(Page 2)

# TITLE OF THE STUDY

(College Emblem)

A Dissertation submitted in partial fulfilment for the award of

# **MASTER OF OPTOMETRY (M.OPTOM)**

Degree to

# **KERALA UNIVERSITY OF HEALTH SCIENCES, THRISSUR**

Month & Year

By

# NAME OF THE CANDIDATE

# **Registration No**

Under the Guidance of

Guide

Co-Guide

Name & Designation

Name & Designation

(Page 3) TITLE OF THE STUDY

(College Emblem)

A Dissertation submitted in partial fulfilment for the award of

# MASTER OF OPTOMETRY (M.OPTOM)

Degree to

# **KERALA UNIVERSITY OF HEALTH SCIENCES, THRISSUR**

# Month & Year

By

# Name

# **Registration No**

# EXTERNAL EXAMINER

Name:

Signature:

Designation:

# INTERNAL EXAMINER

Name:

Signature:

Designation:

Date:

(Page 4)

# Name of the College

This is to certify that	t this dissertation
·	(Tit
of Study)" is a bonafide work do	ne by (Name of the
<b>Candidate)</b> in the Depar	rtment of Optometry,
	(Name of the College)
Head of the Department	Principal
Name	Name
College Name	College Name
Data	
Date: Place:	
(Page	
Name of the	e College

This is to certify that this dissertati	ion ""(Name of the Study)
is a bonafide work done by	(Name of the Candidate) under
our supervision and guidance. We a	are satisfied with the work presented
by the candidate towards the partia	l fulfilment of Master of Optometry.
(Signature)	(Signature)
Guide	Co-Guide
Name & Designation	Name & Designation
Date:	
Place:	
(Pa	ige 6)
DECLA	RATION
<b>, , , , ,</b>	
I hereby declare that this work en	titled ""(Name of
<b>the Title)</b> has been carried ou	it by me under the guidance and

supervision	of			(Na	me	of	the	Guide,
<b>Designation</b>	and th	nis work	has not be	en submitt	ed e	arlie	r to ar	ny other
University for	the av	vard of ar	ny degree o	or diploma.				
Place				N	ama	oft	ha Ca	ndidate
				IN	anne			nunuate
Date								

#### (Annexure)

# **TEACHING SKILL EVALUATION FORM**

Student:

Date:

Evaluator:

## Rating of Skill

- 5 Outstanding
- 4 Good
- 3 Satisfactory
- 2 Poor
- 1 Unacceptable

# Tasks:

- 1. Specifies purposes of the lecture clearly in the Introduction
- 2. Makes clear transitions between segments of the lecture
- 3. Presents divergent view points for contrast and comparison
- 4. Uses clear, relevant examples to illustrate main ideas
- 5. Clarifies technical terminology
- 6. Speaks at suitable volume/ pace, speaking style
- 7. Uses eye contact (Scans total audience)
- 8. Uses a variety of facial expressions
- 9. Uses hands and arms appropriately/moves purposefully
- 10. Effectively used Black Board, AV Aids
- 11. Summary of main points
- 12. Ask questions
- 13. Answer questions asked by audience
- 14. Content coverage
- 15. Rapport with students

Total Score

## **Overall Score**

- 61 75 : Excellent
- 51 60 : Good
- 41 50 : Satisfactory
- 31 20 : Poor

Less than 20 : Unacceptable

## (Annexure)

# JOURNAL CLUB PRESENTATION EVALUATION FORM

Student:

Date:

Evaluator:

#### Rating of Skill

- 5 Outstanding
- 4 Good
- 3 Satisfactory
- 2 Poor
- 1 Unacceptable

## Tasks:

- 1. Article chosen
- 2. Specifies purposes / goal of the study
- 3. Whether cross references have been consulted
- 4. Presents the Methodology Cleary
- 5. Clarifies Outcome measures
- 6. Presents the Results Cleary
- 7. Power of the study
- 8. Presents the discussion clearly
- 9. Limitations of the study
- 10. Ethical issues
- 11. Describe how the results can or cannot be applied in our situation
- 12. Their own decision about the utility of the study in our practice
- 13. Does not needed to reread article
- 14. Summarizes Presentation
- 15. Ability to defend their study

Total Score

#### **Overall Score**

- 61 75 : Excellent
- 51 60 : Good
- 41 50 : Satisfactory
- 31 20 : Poor

Less than 20 : Unacceptable

(Annexure)

# **CASE PRESENTATION EVALUATION FORM**

Student:

Date:

Evaluator:

Rating of Skill

- 5 Outstanding
- 4 Good
- 3 Satisfactory
- 2 Poor
- 1 Unacceptable

#### Tasks:

- 1. Subjective Examination
- 2. Objective Examination
- 3. Logical sequences
- 4. Treatment planning
- 5. Demonstration of examination skills
- 6. Demonstration of intervention skills
- 7. Explain the rationale of Treatment interventions
- 8. Understanding of movement dysfunction
- 9. Clarity of Presentation
- 10. Answer to the questions

Total Score

#### **Overall Score**

- 61 75 : Excellent
- 51 60 : Good
- 41 50 : Satisfactory
- 31 20 : Poor
- Less than 20 : Unacceptable

(Annexure)

## **DESSERTATION PRESENTATION EVALUATION FORM**

Student:

Date:

Evaluator:

#### Rating of Skill

- 5 Outstanding
- 4 Good
- 3 Satisfactory
- 2 Poor
- 1 Unacceptable

#### Tasks:

1. Selection of topic

2. Knowledge about the selected topic

3. Need of the study

4. Statement of hypothesis

5. Review of literature

6. Selection of research design

7. Selection of appropriate Sample size

8. Selection of appropriate Sampling technique

9. Selection of appropriate statistical tool

10. Selection of appropriate Outcome measures

11. Quality of protocol

12. Power of the study

13. Logical sequence of presentation

14. Answer questions asked by evaluators

15. Use of research terminologies

Total Score

#### **Overall Score**

- 61 75 : Excellent
- 51 60 : Good
- 41 50 : Satisfactory
- 31 20 : Poor

Less than 20 : Unacceptable

#### (Annexure) VALUATION OF DESSERTATION WORK BYTHE GUIDE

Student:

Date:

Guide:

#### Rating of Skill

- 5 Outstanding
- 4 Good
- 3 Satisfactory
- 2 Poor
- 1 Unacceptable

#### Tasks:

- 1. Periodic consultation with the guide
- 2. Regular collection of case material
- 3. Depth of analysis and discussion
- 4. Presentation of findings
- 5. Quality of final output

Total Score

**Overall score:** 

21 – 25 - Outstanding 16 - 20 - Good 11 – 15 - Satisfactory 6 - 10 - Poor 5 and below 5 – Unacceptable (Annexure) **MODEL OUESTION PAPER** FIRST YEAR MASTER OF OPTOMETRY DEGREE EXAMINATION **ADVANCED CONTACT LENS STUDIES - I** Time: 3hrs Maximum Marks: 80 Instruction: \*Attempt questions as instructed. Draw diagrams and flow charts wherever necessary Answer the following questions: A 25 years old female patient wants to wear contact lenses. She is a borderline dry eye patient, a computer professional and has to wear lenses for long duration and is planning to get married in near future. How will you manage this case? (20 Marks) Write a note on corneal topography. Comment on computer assisted topographic analysis system and mention its uses. (4+4+42=10 Marks) Comment on correction of astigmatism with contact lenses (10 Marks) Write in detail about disinfection system for soft contact lenses (10 Marks) Write note on following contact lenses available in Indian market : Acuvue 2 Acuvue Clear Pure vision HO series  $(2\frac{1}{2} \times 4 = 10 \text{ Marks})$ The spectacle refraction of a myope at a vertex distance of 12 mm was found to be: OD:-5.00DS/-2.00DC x 180 OS : -4.00DS/-1.00DC x 180 Compute the ocular refraction. Explain how does accommodation and convergence changes from wearing spectacle to contact lenses? (5+5 = 10 Marks)Explain the Contact lens management option for Keratoconus (10 Marks)