

SYLLABUS

**for Courses affiliated to the
Kerala University of Health Sciences
Thrissur 680596**



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

Course Code: 301

(2016-17 Academic year onwards)

2016

2. COURSE CONTENT

2.1 Title of course:

Name of the course shall be the **“MASTER OF OPTOMETRY” – (M.OPTOM)**

2.2 Objectives of course

- 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.

2.3 Medium of instruction:

Medium of instruction shall be English

2.4 Course outline:

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.



2.5 Duration:

The program shall be for 2 academic years (Full time). Which spread over 365 days per academic year.

2.6 Syllabus:

As given under clause “ Content of each subject in each year”

The concept of health care counseling shall be incorporated in all relevant areas

2.7 Total number of hour:

As given under clause “ Content of each subject in each year”

2.8 Branches if any with definition :

Not applicable

2.9 Teaching learning methods:

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 life- long 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

2.10 Content of each subject in each year:

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 NO:	Topic	Number of Hours
1.	Relevant Anatomy, Physiology & Biochemistry for Contact Lens management	07
2.	Contact lens material properties and fitting characteristics	10
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:	Topic	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	25 Hrs
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	
13.	Training for daily living skills	
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 NO:	Topic	Number of Hours
	Anatomical and functional aspects of visual development	05
	Abnormal development of vision	05
	Methods to assess the development of visual functions in infants	05
	Limitations of the currently available techniques	02
	Common genetic problems in pediatric age group	05
	Diseases of the orbit and anterior segment	05
	Disease of the posterior segment and neuro-ophthalmological disorders	06
	Ocular manifestation of systemic disorders	03
	Case history, Clinical examination and assessment formats of pediatric patients	10
	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:	Topic	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	08
6.	Visual fitness & Legal aspects	02
7.	Optometry's role in healthcare system – In India & Comparison with other countries	03
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
1.	Introduction I : Biostatistics <ul style="list-style-type: none"> ➤ Definition 	04
	<ul style="list-style-type: none"> ➤ Role of statistics in health science and health care delivery system 	
2.	Introduction II : Research Methodology <ul style="list-style-type: none"> • Research Process • Steps involved in research process 	04
3.	Variables and scales of measurements <ul style="list-style-type: none"> ○ Definitions and examples of qualitative, quantitative, continuous, discrete, dependent and independent variables. ○ Definitions, properties and examples of nominal, ordinal, interval and ratio scales of measurements. 	07



4.	<p>Sampling</p> <ul style="list-style-type: none"> • Population, sample, sampling, reasons for sampling, probability and non-probability sampling. ☐ Methods of probability sampling – simple random, stratified, systematic, multi-phase, multi stage procedure • Errors in Sampling • Merits and demerits. • Use of random number table 	07
5.	<p>Organization of data</p> <ul style="list-style-type: none"> ➤ Frequency table, histogram, frequency polygon, frequency curve, bar diagram, pie chart 	06
6.	<p>Measures of location</p> <ul style="list-style-type: none"> ➤ Arithmetic mean, median, mode, quartiles and percentiles – definition ➤ Computation (for raw data), merits, demerits and applications 	05



7.	<p>Measures of variation</p> <ul style="list-style-type: none"> ▣ Range, inter-quartile range, variance, standard deviation, coefficient of variation – definition • Computation (for raw data), merits, demerits and applications 	05
8.	<p>Probability Distribution</p> <ul style="list-style-type: none"> ▣ Normal distribution, Binomial distribution, Poison distribution – importance, uses merits & demerits • Concept, graphical form, properties, examples • Concept of Skewness and Kurtosis 	05
9.	<p>Correlation and regression</p> <ul style="list-style-type: none"> ○ Scatter diagram ○ Correlation & Regression ○ Concept and properties of correlation coefficient ○ Regression basic concepts 	05
10.	<p>Vital statistics and Hospital statistics</p> <ul style="list-style-type: none"> ➤ Rate, ratio, proportion, Incidence, Prevalence, Common morbidity, mortality and fertility statistics – Definition & computation 	05
11.	<p>Test of significance & Estimation</p> <ul style="list-style-type: none"> ➤ Null hypothesis, Alternate hypothesis, 	



	<p>standard error, level of significance.</p> <ul style="list-style-type: none"> ➤ Estimation basic concepts, interval estimation, population mean & proportion. 	05
12.	<p>Chi-square test</p> <ul style="list-style-type: none"> ▪ Applications of chi-square test ▪ Extension of 2 X 2 table <p>Analysis of Variance (ANOVA)</p>	04
13.	<p>Non-parametric Tests</p> <ul style="list-style-type: none"> ➤ Uses, Advantages & Disadvantages of non-parametric tests 	04
14.	<p>Concept of reliability & validity (evaluation of diagnostic tests)</p>	03
15.	<p>Epidemiology</p> <ul style="list-style-type: none"> ➤ Concept of health and disease ➤ Definition and aims of epidemiology ➤ Descriptive Epidemiology – method and uses <ul style="list-style-type: none"> o Case report, Case series, Cross-sectional study, Case control study, Cohort study 	05
16.	<p>Sample size determination</p>	03
17.	<p>Format of scientific documents</p>	03



	Total Hours	80
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Reference Books:

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

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:	Topic	Number of
1.	Keratoconus and its various management options	07
2.	Post refractive surgery contact lens fitting (Post LASIK, Post PKP, Post RK etc)	10
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
2. 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.

सर्वे भवन्तु सुखिनः



Unit NO:	Topic	Number of Hours
1.	Anterior segment pathologies & Management Lids, Orbit & Adnexa Conjunctiva Cornea Sclera & Episclera Lens Uvea Lacrimal disorders	30
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.

Objectives of Clinical Practicum:

- ◆ 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:	Topic	Number of Hours
1.	Ethical & Legal issues related to photo documentation	10
2.	Instrumentation and lighting requirements	
3.	Interfacing of Ophthalmic instruments with various imaging devices	
4.	Image analysis, editing, Processing and database management	
5.	Use of imaging in patient management, education and communication with other clinicians	
6.	Anterior segment imaging devices – Topography, Anterior OCT, Confocal Microscope, SL photography, Glaucoma diagnostic equipment's and recent advances	20
7.	Posterior segment imaging devices – FFA & ICG, OCT, B- Scan & Electro diagnostics and recent advances.	10
	Total	40 Hrs.

- ✓ Hands on training with clinical imaging equipment's has to be conducted

Reference Books:

1. 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

PAPER – IV – DISSERTATION

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.

2.11 No: of hours per subject:

As given under clause “Content of each subject in each year “

2.12 Practical training:

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.

2.13 Records:

To be maintained for all Practical Work

2.14 Dissertation:

Synopsis should be submitted to the University within six months of joining the course. Dissertation should be submitted three months before the commencement of second year university Examination. Board of Examinations shall appoint two Faculties for the valuation of Dissertation and the valuation form shall mention "Accepted / Accepted with modification /Rejected." If it is accepted with modifications, candidate will be given 45 days for correction and resubmission through proper channel. If it is rejected it will be send to another external expert for second valuation. If it is again rejected the candidate will not be permitted to appear for the examination. He/she should then redo the work and submit with in a period of six months. Such dissertations will be valued in the examination centre itself at the time of practical/clinical examination.

Standard format of dissertation

The dissertation should be submitted in the APA format. The APA format is given in the annexure.

Change of dissertation topic/Guide

As per KUHS Regulations.

2.15 Speciality training if any

As given under clause "Content of each subject in each year "

2.16 Project work to be done if any

As given under clause "Content of each subject in each year "

2.17 Any other requirements [CME, Paper Publishing etc.]

As given under clause "Content of each subject in each year "

2.18 Prescribed/recommended textbooks for each subject

As given under clause "Content of each subject in each year "



2.19 Reference books

As given under clause “Content of each subject in each year “

2.20 Journals

As given under clause “Content of each subject in each year “

2.21 Logbook

To be maintained for all academic work and shall be countersigned by the concerned HOD

3 EXAMINATIONS

3.1 Eligibility to appear for exams:

- It is mandatory to pass in all the papers of 1st year in order to appear for the 2nd year M. Optom examination. The candidate who fails in one or more paper in 1st 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 50% of marks in internal assessment to be eligible to write the university examination.

3.2 Schedule of Regular/Supplementary exams:

There will be two examinations, one regular and one supplementary in an academic year. The supplementary examinations shall be conducted within 6 months after declaration of results.

3.3 Scheme of examination showing maximum marks and minimum marks

SCHEME OF EXAMINATION FOR THE FIRST YEAR MASTER OF OPTOMETRY (M.OPTOM)

The candidate shall appear for the following theory examinations.

1. Advanced Contact Lens Studies - I (Paper-I)



2. Low Vision and Rehabilitation (Paper-II)
 3. Paediatric Optometry (Paper-III)
 4. Occupational Optometry & Public health Optometry (Paper-IV)
- Research methodology & Biostatistics (Paper-V)

SL No	Subject	UNIVERSITY								INTERNAL ASSESSMENT				Total
		Theory		Practical/viva						Theory		Practical		
				Practical		viva		Total		/ Viva				
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
1	Paper – I	40	80	15	30	-	20	25	50	10	20	25	50	200
2	Paper – II	40	80	15	30	-	20	25	50	10	20	25	50	200
3	Paper – III	40	80	15	30	-	20	25	50	10	20	25	50	200
4	Paper – IV	40	80					-	-	10	20	--		100
5	Paper – V	40	80					-	-	10	20	--		100
GRAND TOTAL													800	



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

Clinical postings – 1st Year M.Optom

700 Hrs.

**SCHEME OF EXAMINATION FOR THE SECOND YEAR MASTER OF OPTOMETRY
(M.OPTOM)**

The candidate shall appear for the following theory examinations

- Advanced Contact Lens Studies II (Paper – I)
- Ocular Diseases & Therapeutics (Paper – II)
- Clinical Imaging (Paper - III)
- Dissertation (Paper - IV)

		UNIVERSITY	INTERNAL ASSESSMENT
		Practical/viva	Practical/ Viva/Diss

No	Subje ct	Theory		Practical/ Dissertati on		viva		Total		Theory		Logbook/Jo urnal club/Integ rated teaching/S eminar		Total
		Mi n	Ma x	Mi n	Ma x	Min	Ma x	Mi n	Ma x	Mi n	Ma x	Mi n	Ma x	
1	Paper – I	40	80	15	30	-	20	25	50	10	20	25	50	200
2	Paper – II	40	80	15	30	-	20	25	50	10	20	25	50	200
3	Paper – III	40	80	-	-	-	-	-	-	10	20	-	-	100
4	Paper – IV	-	-	35	70	-	30	50	100	-	-	50	100	200
GRAND TOTAL														700



3.4 Papers in each year:

As given under clause “Scheme of examination showing Maximum & Minimum marks”

3.5 Details of theory exams:

As given under clause: 3.3 “Scheme of examination showing Maximum & Minimum marks”

3.6 Model question paper for each subject with question paper pattern

MODEL QUESTION 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 contactlenses

(10 Marks)

Write note on following contact lenses available in Indian market :

Acuvue 2

Acuvue Clear Pure vision HO series

(2½ x 4 = 10 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)

3.7 Internal assessment component

- Minimum three internal examinations shall be conducted in each subject during a year of which the final one is University model examination and is mandatory. The average marks of two best performances shall be taken into consideration for the award of internal marks.
- 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.
- A candidate must obtain 50% of marks in internal assessment to be eligible to write the university examination. The class average of internal assessment marks the whole class should not exceed 75% of maximum marks for regular examination and 80% for supplementary examination.



3.8 Details of practical/clinical practicum exams:

As given under clause “Scheme of examination showing Maximum & Minimum marks”.

3.9 Number of examiners needed (Internal & External) and their qualifications:

As per the KUHS norms from time to time

Qualification of Examiner

Theory Examination Paper 1- M. Optom (Optometrist) with 5 year experience

Paper 2- M. Optom (Optometrist) with 5 year experience

Paper 3- MS Ophthalmology+5 year experience

*In case of M Optom with 5 year experience is not available due to shortage of staff MS ophthalmology with 5 year experience may be permitted to conduct the Examinations as internal and external examiner.

3.10 Details of viva:

As given under clause “ Scheme of examination showing Maximum & Minimum marks”

4. INTERNSHIP

NOT APPLICABLE

5. ANNEXURES

5.1 Check Lists for Monitoring: Log Book, Seminar Assessment etc. to be formulated by the curriculum committee of the concerned Institution.

