REGULATIONS AND CURRICULUM GOVERNING

MASTER OF OPTOMETRY PROGRAM

Implemented in Academic Year 2022

Amended Up to 2025

Name of the Constituent Unit/Centre: YENEPOYA SCHOOL OF ALLIED HEALTH SCIENCES



Deralakatte, Mangalore, Karnataka.

NOTIFICATION FROM THE UNIVERSITY

SL NO	ACM with date	BOM/BOS with date	Decision/Approval
1.	43rd ACM/ 07.07.2021	50th BOM/ 28.8.2020	Proposal for Introducing Choice Based Credit System for M.SC. Technology Program
2.	48th ACM/ 05.11.2022	54th BOM/ 08.07.2021	Starting of Choice Based Credit System Master of Optometry under the allied & Healthcare Professions
3.	51st ACM/ 16.05.2023	62nd BOM/ 14.06.2023	Approval of CBCS regulations: Form CIA 40% and SEE 60% to CIA 50% and SEE 50%. Minimum pass marks for CIA shall be 50% and SEE shall be 50%
4.	55th ACM/ 15.04.2024	4th Executive council/ 10.09.2024	Intake of seats for Postgraduate Programs under the Faculty of Allied & Healthcare Professions
5.	58th ACM/ 13.08.2024	4th Executive council/ 10.09.2024	Approved the amendment of the dissertation credit distribution from 6 credits to 12 credits.
6.	63rd ACM/ 13.05.2025	8th Executive council/ 10.06.2025	Approved the amendment on Structured continuous internal assessment components of PG dissertation

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1. Preamble

Health care sector has become one of the largest employment generation sectors in India and abroad. Rapidly changing and expanding horizon of the health care sector demands formal training programs in all its Allied areas. Postgraduate Program in Allied Health sciences specialty often encompasses a wide range of disciplines. The learning during post-graduation is usually heavily research focused. Professionals in the medical field rely heavily on modern technology to successfully treat, diagnose, and care for patients. By doing post-graduation in Allied health discipline, one will be preparing for a career as an educator, researcher, or technologist. Students may find a variety of options upon completion of post-graduation such as managing the Optical, hospital etc. They can also join as teachers in the faculty of Allied and health professionals. They can also do research pursue doctorate in their field of interest. They can also join biomedical equipment manufacturing company and pharmaceutical company as experts in their field.

The post-graduation in Optometry will prepare the candidate for a career as an educator researcher, or therapist. Students may find a variety of options upon completion of post-graduation. Academic and Research pursuit are other areas that offer opportunities for professional growth and development. The scope of growth in the field is tremendous with the improving healthcare system. To match our education system with the international educational pattern all the postgraduate programs are with Choice Based Credit System.

2. Definitions

2.1. Academic Year:

Two consecutive (one odd + one even) semesters constitute one academic year.

2.2. Choice Based Credit System:

The CBCS provides choice for students to select from the prescribed courses (core, elective or minor or soft skill courses).

2.3.Course:

Usually referred to, as ‘papers‟ is a component of a program.

The courses shall define learning objectives and learning outcomes. A course shall comprise lectures/tutorials/laboratorywork/fieldwork/outreachactivities/projectwork/vocationaltraining/viva/seminars/termpapers/assignments/presentations/self-studyetc.oracombination of some of these.

2.4.Credits:

Credit defines the quantum of contents/syllabus prescribed for a course and determines the number of hours of instruction required per week. Thus, normally in each of the courses, credits will be assigned on the basis of the number of lectures/tutorial laboratory work and other forms of learning required, to complete the course contents minimum of 15-week schedule: One credit=1hour of lecture per week/two hours of Laboratory or practical/three hours of clinical rotation, field work/posting. All courses need not carry the same credits.

2.5. Programs:

An educational program leading to award of a degree, diploma or certificate.

2.6. Grade Point:

It is a numerical weight allotted to each letter grade on a10-pointscale.

2.7 . Credit Point:

It is the product of grade point and number of credits for a course.

2.8 Cumulative Grade Point Average (CGPA):

It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

2.9 Letter Grade:

It is an index of the performance of students in a said course. Grades are denoted by letters: O+, O, A+, A, B+, P, F.

2.10 Semester Grade Point Average (SGPA):

It is a measure of performance of work done in a semester. It is ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.

2.11 Transcript or Grade Card or Certificate:

Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, number of credits, grade secured) along with SGPA of that semester.

Type of Courses

2.12 Core course:

A course that should compulsorily be studied by a candidate as a core requirement is termed as a core course. This is the core requirement to complete the Master of Optometry Program.

2.13 Skill Enhancement Course:

These courses are aimed at improving practical, professional & procedural knowledge requirement for carrying the highly skilled task related to the field of study.

2.14 Multidisciplinary Elective:

Generally, a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/subject of study or which provides an extended scope or which enables an exposure to some other discipline or subject or domain or nurtures the candidate's proficiency skill.

A candidate shall have the freedom to choose Multidisciplinary Elective courses during the academic

duration of the particular PG Program offered by Yenepoya (deemed to be) University through the PG departments or SWAYAM/MOOC external online platforms or a mix of courses offered by Yenepoya (deemed to be) University and SWAYAM/MOOC as appropriate.

i. A candidate opting for SWAYAM/MOOC courses shall have the freedom to choose the courses of once own choice and complete such courses before appearing fourth Semester End Examination.
ii. A candidate shall compulsorily submit the pass certificate of each course successfully completed to the controller of examination of Yenepoya (deemed to be) University through the proper channel before appearing the fourth semester end examination.
iii. A candidate opting multidisciplinary elective courses offered by the Yenepoya (deemed to be) University through the PG departments need to take up these courses generally during second and third semesters of the program.
iv. A candidate shall not take the courses offered by the department in which she/he is enrolled.
v. Registration for the multidisciplinary elective courses offered by the Yenepoya (deemed to be) University shall be at least one week prior to the commencement of the course with the CBCS coordinator. The CBCS unit shall notify the list of courses after being approved by the respective BOS. For SWAYAM/MOOC courses shall be as per the enrollment notification by the respective implementation authorities.

Yenepoya (deemed to be) University shall adapt the regulations of UGC governing SWAYAM/MOOC courses as amended from time to time.

3. Eligibility for admission

To be eligible for admission a candidate shall have obtained a bachelor degree (B.Sc. Optometry) from university established under law considered equivalent by there to by Yenepoya (Deemed to be University). The candidate shall have obtained minimum of 50%aggregate of marks in all the years of university examination of degree course.
In case of SC/ST/OBC candidates the minimum marks shall be 45.

4. Duration of the Programme

The duration of the program shall extend over 4 semesters (2 academic years) of 15 weeks or more each with a minimum of 90 actual working days of instructions in each semester and 2 – 3 weeks of examinations. The successful completion will lead to Masters' degree in Optometry.

Semester

An academic year shall consist of two semesters;

Odd Semester 1st& 3rd	September/October to February/March
Even semester 2nd& 4th	March/April to August/September

5. Maximum Period for Completion of the Programme

A Candidate shall complete the four semesters (two years) programme within four years from the admission.

6. Aim of the Programme

The aim of the MSc Optometry program is to develop competent eye-care professionals with advanced knowledge and clinical skills in vision care, ocular disease diagnosis, and management. The program focuses on integrating theoretical understanding with hands-on clinical training, research aptitude, and ethical practice to prepare graduates for professional practice, higher studies, and contributions to community eye health and vision science

7. Outcomes of the program

Program Outcomes

PO 1: Enhance knowledge from clinical experience, interactions & other means of professional development; discussions and research to improve the quality of training and education in Optometry. (K, C, S, A)

PO 2: Explore a specialized field in depth and develop high degree of expertise to contribute to advancement of knowledge in Optometry. (K, S)

PO 3: Develop teaching and presentation skills necessary to become efficient teachers utilizing state-of-the art facilities. (K, C, S, A)

PO 4: Build up leadership qualities in education, practice and administration. Expected skill to be acquired by the end of the programme: (C, S, A)

PO 5: Become primary eye care service provider in Eye hospitals/clinics. (K, C, S, A)

PO 6: Earn key posts in academic institutions including teaching, research and also in public health service (K, C, S, A)

PO 7: Offer clinical services to multinationals dealing with manufacturing and distribution of ophthalmic lenses, Low Vision Devices, Contact lenses and Ophthalmic Instruments. (K, C, S, A)

Program Structure

	Broad category of course	Hours / Credits	Course (Title)
1.	**Discipline-Specific Courses**		
a)	Theory	**I Semester**	
		45 Hours / 3Credits	Epidemiology & Community Eye care
		45 Hours / 3Credits	Ocular Diseases & Diagnostics I
		45 Hours/ 3 Credits	Biostatistics & Research Methodology
		II Semester	
		45 Hours / 5 Credits	Ocular Diseases & Diagnostics II,
		45 Hours / 4 Credits	Advanced Contact Lens
		45 Hours/ 3 Credits	Bioethics
		III Semester	
		45 Hours / 4 Credits	Pediatric & Binocular Vision,
		45 Hours / 3Credits	Applied Vision Therapy
		45 Hours / 3Credits	Health Care Management
		IV Semester	
		45 Hours / 3Credits	Visual Neuroscience and Psychophysics
		45 Hours / 3Credits	Low Vision Rehabilitation,
B	Practical (SEC)*	**I Semester**	
		120 Hours/4 credits	Optometry Clinical Skills I-Practical II

		180 hours/4 credits	Practical III
		II Semester	
		120 Hours / 4Credits	Optometry Clinical Skills II, Practical I
		III Semester	
		120 Hours / 4Credits	Optometry Clinical Skills III, Practical I
		IV Semester	
		120 Hours /4 Credits	Optometry Clinical Skills IV, Practical I
b)	Clinical (SEC)*	**I Semester**	
		120 Hours / 4Credits	Optometry Clinical Skills I Practical I
		II Semester	
		180 Hours / 4Credits	Optometry Clinical Skills II, Practical II
		III Semester	
		180 Hours / 6Credits	Optometry Clinical Skills III, Practical III
		IV Semester	
		180 Hours / 4Credits	Optometry Clinical Skills IV, Practical II
		IV Semester	
a)	Research Project	12 Credits	Dissertation
2.	**Electives**		
a)	Interdisciplinary Courses	90 hours/6 credits	Coursera/Swayam
	Total	**93 Credits**	

8. Attendance

8.1. Each course (theory, practical, clinical etc.) shall be treated as an independent unit for the purpose of attendance. Candidates having minimum 80% attendance in each of the Courses can only qualify to appear for the Semester End Examination. The Candidates with less than 80% of attendance shall be required to repeat that Course by attending the semester.

8.2. There shall be no provision for condonation of shortage of attendance.

8.3. For SWAYAM/MOOC/NPTEL it shall be as per the regulations governing the courses of implementing authority.

8.4. The HOD/Course Coordinator through the Dean of Faculties shall announce the names of the candidates who will not be eligible to take the Semester End-Examinations (SEE) in the various courses and send a copy of the same to the Controller of Examinations (COE) Office. Registrations of such candidates for those courses shall be treated as cancelled.

09. Teaching - Learning methods course-wise

Teaching - Learning method	Courses
Experiential learning	Optometry Clinical Skills I-IV
Integrated/ Inter-disciplinary learning	Bioethics, Healthcare Management,
Participatory learning	Bioethics, Healthcare Management, Advanced Contact Lens I, Advanced Contact Lens II, Applied Vision Therapy, Low Vision Rehabilitation
Problem-solving methodologies	Advanced Contact Lens I, Advanced Contact Lens II, Applied Vision Therapy, Low Vision Rehabilitation Biostatistics & Research Methodology
Self-directed learning	Coursera/Swayam, Ocular Disease & Diagnostics I, Ocular Disease & Diagnostics II,
Patient-centric and Evidence-based learning	Ocular Disease & Diagnostics I, Ocular Disease & Diagnostics II, Advanced Contact Lens I, Advanced Contact Lens II, Applied Vision Therapy, Pediatric & Binocular Vision Low Vision Rehabilitation Epidemiology & Community Eye care Optometry Clinical Skills I-IV
The Humanities	Bioethics

Teaching - Learning method	Courses
Project-based learning	Dissertation, Biostatistics & Research Methodology
Role-play	Low Vision Rehabilitation Pediatric & Binocular Vision
Team-work	Applied Vision Therapy, Low Vision Rehabilitation Pediatric & Binocular Vision Epidemiology & Community Eye care
Reflective writing	Epidemiology & Community Eye care Ocular Disease & Diagnostics I, Ocular Disease & Diagnostics II Bioethics Healthcare Management

10. Scheme of Examination

10.1 Continuous Internal assessment components

Continuous Internal assessment components	Maximum marks
Average of two IA tests	20
Case Studies/Seminar/Assignments/Quizzesetc.	30
Total marks	50

10.2 Question Paper Pattern

Subjects having maximum marks = 50				Duration
Type of question	Number of questions	Marks for each question	Total	150 min
Long essay type	02	15	30	
Short essay Type	02	10	20	
Total			50	

10.3 Practical Examination

SI.NO	Components	Marks
1	Spotters	10
2	Case Scenario/OSCE/OSPE	20
3	Viva Voce	20
Total Marks		50

10.4. Particulars of practical, viva-voce & dissertation

10.4.1 Practical examination will be aimed at examination of clinical skills and competence of the candidates for undertaking independent work as a specialist.

10.4.2 Viva-Voce examination shall aim at assessing depth of knowledge, logical reasoning, confidence &oral communication skills.

10.4.3 Special emphasis shall be given to dissertation work during the M.Sc. Optometry 2ndYear examination.

10.4.4 The marks of Viva-Voce examination shall be included in the clinical examination to calculate the percentage and declaration of results.

10.4.5 OSCE/OSPE-shall have minimum of 5 stations.

10.5 Evaluation and Certification of online courses:

10.5.1 Evaluation will be based on predefined norms and parameters and announced in the overview of the Course at the time of offering the course. Formative continuous online assessments and end of course proctored exams shall be completed by the student.

10.5.2 The certificate obtained shall be submitted to the college office which will be communicated to the office of the Controller of Examinations of Yenepoya (Deemed to be University).

10.5.3 The Yenepoya (Deemed to be) University will give the equivalent credit weightage to the students for the credits earned through online learning courses through MOOCS/Coursera as per the credit plan of the program.

10.6 Credit Mobility of Online Courses:

10.6.1 The Yenepoya (Deemed to be University) will give the equivalent credit weightage to the students for the credits earned through online learning courses as per the credit plan of the program.

10.6.2 In case a student fails to complete the online course he/ she may be allowed to complete the course requirements by registering for another online course in subsequent semester or opt for a course offered at Yenepoya (Deemed to be University), provided such a course is offered during that semester.

10.6.3 The elective course offered by the Yenepoya (Deemed to be University) shall be restricted to a maximum of 3 credits.

10.6.4 A candidate shall compulsorily complete total 6 Credits of Multidisciplinary courses.

10.6.5 These courses shall be selected either from the Generic Electives offered by the Yenepoya (Deemed to be) university or from the SWAYAM/Coursera courses. A Candidate shall have freedom to choose the courses of once own choice and learn at their own pace but, require to complete minimum 3 credits before second semester and 6 credits before third semester SEE.

10.6.6 A candidate who wishes to earn additional credits may be permitted to do so during the academic duration.

10.7 Continuous Internal Assessment Components of PG Dissertation

<table>
<tr><td></td><td colspan="2">Parameters</td><td>Marks</td></tr>
<tr><td></td><td colspan="2">Maintaining the timeline</td><td>10</td></tr>
<tr><td rowspan="4"></td><td colspan="2">Presentation a Conference /CME/Publication (student can choose any of the criteria to avail 40 marks)</td><td rowspan="4">40</td></tr>
<tr><td>Criteria</td><td>Marks Allocated</td></tr>
<tr><td>Online Oral/Online Poster/Offline Poster presentation/Conference proceeding publications in Scopus/ WoS indexed journals/Publication of Copyright</td><td>20</td></tr>
<tr><td>Offline oral presentation at National/International Conference/Patents/Publication of Review Paper/Pilot Study/Study Protocol in Indexed Journal</td><td>40</td></tr>
<tr><td></td><td colspan="2">Manuscript submission (Based on the dissertation) to the Indexed journals (SCOPUS/WoS) along with submission of final dissertation</td><td>50</td></tr>
<tr><td></td><td colspan="2">Total</td><td>100</td></tr>
</table>

10.8. Assessment of Research Project

A declaration by the candidate that the work was done by him/her shall be included. The guide, Head of the department and Head of the Institution shall certify the bonafide of the project.

Total 200 marks shall be awarded for the research project and the mark distribution as follows:

- 100 marks – Dissertation evaluation by Internal and External examiners
- 100 marks - Continuous Internal Assessment

10. 9. Evaluation of Dissertation

10.91. Dissertation shall be evaluated by two examiners, one External & one Internal for 100 marks from the panel of examiners approved by the Board of Studies and by the University.

10.92. The criteria for the evaluation shall be as prescribed by the Board of Studies.

10.93Acceptance of the dissertation is a pre-requisite for a candidate to be eligible to appear in the final examination.

10.10Guide:

10.10.l. The academic qualification and teaching experience required for recognition of guide shall be as given under:

10.10.2. MS in Ophthalmology with 2 years of teaching experience or Ph.D. in Optometry or M.Sc. Optometry with teaching experience of four years after the Masters programme.

10.10.3. Student guide ratio: A recognized guide shall supervise dissertation work of not more than five students per academic year. The age of the guide shall not exceed 65 years.

10.10.4 Co-Guide may be included provided the work requires substantial contribution from a sister department, another institution recognized for teaching in Yenepoya (Deemed to be University), or any other State level University.

10.11. Change of Guide:

In the event of registered guide leaving the Institute/ college due to any reason or in the event of death or any other valid reasons, guide can be changed with prior permission from the University only

11. Eligibility to appear for University Examination

11.1 Evaluation of a course shall be done based on continuous internal assessment (CIA) mode followed by semester end university examination (SEE) for each course.

11.2The components of CIA (Continuous Internal Assessment) may include sessional tests, Seminar/ Journal Club/ Case Studies /Assignment and other activities as determined by the board of studies in the respective departments.

11.3The CIA: SEE percentage is 50:50 and minimum marks for CIA shall be 50% and SEE shallbe 50%.

11.4 The pass marks per course shall be 50%

11.5 There shall be examinations at the end of each semester ordinarily during February/March for odd semesters and August/September for even semesters

11.6 The SEE duration shall be two and half hours.

12. Criteria for passing

12.1. A candidate shall be declared to have passed the PG program if he/she secures at least CGPA of 5.0 (Course Alpha-Sign Grade P) in the aggregate of both internal assessment and semester end examination marks.

12.2. The candidates who pass all the semester examinations in the first attempts in Two years are eligible for ranks provided they secure at least a CGPA of 8.0 (at least Alpha-Sign Grade A).

12.3. The results of the candidates who have passed the fourth semester examination but not passed the lower semester examinations shall be declared as NCL (Not Completed Lower semester examinations). Such candidates shall be eligible for the degree only after completion of all the lower semester examinations.

12.4. A candidate who passes the semester examinations in parts is eligible for only CGPA and Alpha-Sign Grade but not for ranking.

12.5. There shall be no minimum marks with respect to internal assessment and viva-voice marks.

12.6 . A candidate who fails in any of the project work/project report/dissertation shall reappear for the same and pass the examination subsequently within the nearest semester and examination schedule.

13. Grading and Classification

The results of successful candidates at the end of each semester shall be declared in terms of Grade Point Average (GPA) and Alpha-Sign Grade. The results at the end of the sixth semester shall be classified on the basis of the Cumulative Grade Point Average (CGPA) obtained in all the four semesters and the corresponding overall alpha sign grade.

a. **Letter Grades and Grade Points:**

Letter Grade	Grade Point	Range of Marks
O+(Outstanding)	10	90–100
O(Excellent)	9	80–89.99
A+ (Very Good)	8	70–79.99
A(Good)	7	60–69.99
B+(Average)	6	55–59.99
P(Pass)	5	50–54.99
F(Fail)	<5	<50

b. **Cumulative Grade Point Average (CGPA):**

The results at the end of the fourth semester shall be classified on the basis of CGPA obtained in the four semesters and the corresponding overall letter grade. The letter grade as described below shall be adopted.

Letter Grade	CGPA Range
O+(Outstanding)	9.0–10.0
O(Excellent)	8.0–8.99
A+(Very Good)	7.0–7.99
A(Good)	6.0–6.99
B+(Average)	5.5–5.99
P(Pass)	5.0–5.49
F(Fail)	<5.0

14. Journals

14.1 Optometry and Vision Science. Optom Vis Sci. Lippincott Williams & Wilkins; monthly. ISSN: 1040-5488.

14.2 Clinical and Experimental Optometry. Clin Exp Optom. Taylor & Francis; bimonthly. ISSN: 0816-4622.

14.3 Ophthalmic and Physiological Optics. Ophthalmic Physio Opt. Wiley-Blackwell. ISSN: 0275-5408.

14.4 Contact Lens & Anterior Eye. Contact Lens Anterior Eye. Elsevier; research on contact lenses and anterior segment optics.

14.5 Journal of Optometry. J Optom. Elsevier — open access optometry research journal.

14.6 Optometry & Visual Performance. Optom Vis Perf.

15. Carry Over Provision

Carry over shall be allowed to the candidates up to IV semesters.

16. Re- Entry after Break of the Study

16.1 Candidates admitted to the program abstaining for more than 3 months must seekreadmission in to the appropriate semester.

16.2 The candidate shall follow the syllabus in vogue (currently approved/ is beingfollowed) for the program.

16.3 All re-admissions of candidates are subject to the approval of the Yenepoya (Deemed to University.

17. Course Content

SEMESTER I

Course Title: Epidemiology & Community Eye Care

Course: Core

Credits: 3 **Number of Hours: 45**

Course Outcomes (COs):

After successful completion of this course, the learner will be able to:

1. Thorough understanding of epidemiological concepts.
2. Thorough understanding of conducting of screening for specific eye conditions, and resultant implications through theoretical and practical exposure.

Course Content:

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Type Of Questions
Unit I	5 hrs	**Visual Impairment** 1.1 Study on Prevalence of diseases	✓			LE, SE
		1.2 Study on Incidence of disease and its variants	✓			SE
		1.3 Study on distribution of diseases		✓		LE
Unit II	10hrs	**Epidemiology** 2.1. Detailed study on	✓			LE

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Type Of Questions
		Epidemiological study designs				
		2.2. Detailed study on study design types with examples	✓			LE
		2.3. Detailed study on screening of visual disorders in community setting	✓			LE, SE
Unit III	30hrs	**Community Eye Diseases** 3.1. Introduction on childhood blindness and its screening, management options		✓		SE
		3.2. Revision on Refractive errors and Presbyopia	✓			SE
		3.3. Detailed study on Age related cataract		✓		SE
		3.4. A brief study on Diabetic Retinopathy		✓		LE, SE
		3.5 Detailed study on Glaucoma	✓			LE, SE

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Type Of Questions
		3.6 Detailed study on Age related macular degeneration and its management Options		✓		SE
		3.7 A brief study on Vitamin A deficiency			✓	SE
		3.8 Revision on corneal and external diseases		✓		SE
		3.9 Detailed study on Heath, illness, structure of healthcare system		✓		LE
		3.10 A detailed study on Principles of Epidemiology and Epidemiological Methods	✓			LE
		3.11 Revision on Screening of Eye disease– Refractive errors, Low Vision, Cataract, Diabetic retinopathy, Glaucoma, Amblyopia, Squint	✓			SE
		3.12 Brief study on Blindness		✓		SE
		3.13 A detailed study on health planning and	✓			LE

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Type Of Questions
		management				
		3.14 Detailed Study on Health care and community		✓		LE

Reference Books:

1. Gilbert C. Editors: Johnson, Gordon J., Minassian, Darwin C. &Weale, Robert; The Epidemiology of Eye Disease; 1998; published by Chapman & Hall Medical, London; pp. 436.
2. Kanski JJ, Bowling B. Kanski's clinical ophthalmology e-book: a systematic approach. Elsevier Health Sciences; 2015 Mar 24.

Course Title: Ocular Diseases and Diagnostics I

Course: Core

Credits: 3 **Number of Hours: 45**

Course Outcomes (COs):

After successful completion of this course, the learner will be able to:

CO1: Apply an evidence-based approach to accurately diagnose anterior segment ocular diseases using appropriate clinical tests and diagnostic tools.

CO2: Demonstrate effective clinical decision-making skills for the management and co-management of anterior segment ocular conditions based on current scientific evidence.

CO3: Interpret clinical signs and symptoms to formulate differential diagnoses and treatment plans for common anterior segment disorders.

Course Content:

- **Course Content:**

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
Unit I	15 hrs	**Anterior Segment Ocular Diseases** 1.1Refresher of anterior segment ocular diseases, diagnosis and therapeutics	✓			40%	LE, SE
		1.2 Refresher of glaucoma diagnosis and therapeutics	✓				
		1.3 Surgical treatment of anterior segment diseases		✓			
Unit II	30hrs	**Anterior Segment Diagnostics** 2.1. Specular Microscopy	✓			60%	LE, SE
		2.2 Topography	✓				
		2.3. Corneal Hysteresis	✓				

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
		2.4 Orbscan, Pentacam	✓				SE
		2.5 Pachymetry	✓				SE
		2.6 Abberometry	✓				SE
		2.7 ASOCT	✓				SE
		2.8 HRT	✓				SE
		2.9 GDx	✓				SE
		2.10 ONH evaluation	✓				SE
		2.11 Gonioscopy	✓				SE
		2.12 Fluorescein angiography	✓				LE, SE

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
		2.13 Refractive surgery	✓				LE, SE
		2.14 Cataract evaluation	✓				LE, SE

❖ **LE-** Long Essay**, SE-** Short Essay

➢ **Reference Books**

1. Kanski JJ, Bowling B. Kanski's clinical ophthalmology e-book: a systematic approach. Elsevier Health Sciences; 2015 Mar 24.
2. Grosvenor TP. Primary care optometry. Elsevier Health Sciences; 2007

Course Title: Research Methodology & Biostatistics

Course: Core

Credits: 3 **No. of Hours: 45**

Research Methodology

Course Outcome:

At the end of the Course, the students will

- have knowledge of process involved in Biomedical research from formulation to publication.
- be able to draft a research proposal.

Course Content

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weightage	Type of Question
Unit I	2 hours	**1. Introduction** 1.1 Need for research	✓			10%	SE
		1.2 Types of research	✓				
		1.3 Outlining the research process	✓				
Unit II	2 hours	**2. Review of Literature** 2.1 Importance, sources & steps	✓			10%	SE
		2.2 Critical appraisal of research article	✓				

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weightage	Type of Question
Unit III	**2 hours**	**3. Research Design** 3.1 Types of research – Qualitative & Quantitative	✓			10%	**LE,SE**
		3.2 Experimental & Non Experimental, Survey – advantages & disadvantages	✓				
Unit IV	**2 hours**	**4. Research Process** 4.1 Framing a research question	✓			15%	**LE,SE**
		4.2 Research title	✓				
		4.3 Aim & Objectives, Assumptions, Limitations & Delimitations, Variables	✓				
		4.4 Hypothesis – formation & testing	✓				
Unit V	**2 hours**	**5. Data collection & analysis** 5.1 Data sources, technique of data collection, tools	✓			20%	**LE,SE**

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weightage	Type of Question
		5.2 Reliability & validity	✓				
		5.3 Process of data collection	✓				
		5.4 Pilot study – method, need	✓				
Unit VI	**2 hours**	6. **Interpretation & presentation of data** 6.1 Qualitative & quantitative analysis	✓			15%	**LE, SE**
		6.2 Graphical representation of data	✓				
		6.3 Conclusion & discussion	✓				
Unit VII	**2 hours**	7. **Discussion, Conclusion and References**	✓			10%	**SE**
Unit VIII	**2 hours**	8. **Essentials of writing a research paper along with process of publication**	✓			10%	**LE**

Biostatistics

Course Outcome:

At the end of the Course, the students will be able to

- Able to distinguish different data types, variables and scales of measurement
- Able to organize, tabulate and present data through tables and graphs. Compute and interpret descriptive statistics
- Able to compute and interpret sensitivity, specificity, PPV, NPV and ROC Analysis.
- Able to determine sample size and use of random sampling methods.
- Able to interpret Power of a test, Level of significance, p value and confidence interval. Use of t-test, ANOVA and m3ultiple comparison.
- To interpret the commonly used parametric and nonparametric tests and how to report the findings.
- Carryout correlation analysis and interpret the results
- Perform regression analysis and draw conclusions of the analysis. Use the regression model for predictions.

Course Content:

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weightage	Type of Question
Unit I	**6 hours**	**1. Introduction** 1.1 Introduction to biostatistics &research methodology, types of variables & scales of measurements, measure of central tendency & dispersion, rate, ratio, proportion, incidence & prevalence	✓			5%	**LE,SE**
Unit II	**3 hours**	2. **Sampling** 2.1 Population & Sample, Sampling and non-sampling errors and methods of minimizing these errors, Random and non-random sampling, different sampling	✓			10%	**LE,SE**

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weightage	Type of Question
		techniques – simple random, stratified, systematic, cluster& multistage.					
Unit III	**3 hours**	3. **Sampling distributions** 3.1 Parameter and Statistic. Standard error. Basic probability distributions - Normal, poison, binomial distributions with their applications in biological sciences.	✓			5%	**SE**
Unit IV	**6 hours**	**4. Tests of significance** 4.1 Basics if testing of hypothesis – Null & Alternative hypothesis, type 1 and type II errors, level of	✓			15%	**LE,SE**

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weightage	Type of Question
		significance (parametric) & power of the tests, p value, Confidence interval. Tests of significance – T test (paired &UN paired), Chi square test & Test of proportion, One way analysis of variance. Repeated measures analysis of variance. Tests of significance (non-parametric) – Mann – Whitney U Test, Wilcoxon Test, Kruskal – Wallis Analysis of variance, Friedmann's Analysis of variance					

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weightage	Type of Question
Unit V	**3 hours**	**5. Correlation and regression** 5.1 Linear correlation by Karl Pearson and rank order correlation due to Spearman, Testing the significance of correlation co efficient, simple linear regression – estimation & testing, residual plots, multiple linear regression.	✓			15%	**LE**
Unit VI	**2 hours**	**6. Sample size determination** **6.1** General concept. Sample size for estimating means and proportion, testing of difference in means and proportions of two groups.	✓			5%	**SE**

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weightage	Type of Question
Unit VII	**2 hours**	**7. Study designs** 7.1 Epidemiological methods – case series analysis and prevalence studies. Analytical epidemiological methods – case control and cohort studies. Clinical trials / intervention studies, odds ratio and relative risk, stratified analysis	✓			10%	**SE**
Unit VIII	**2 hours**	**8. Multivariate analysis** 8.1 Concept of multivariate analysis, introduction to logistic regression and survival analysis	✓			15%	**LE, SE**
Unit IX	**1 hours**	**9. Reliability and validity of diagnostic tests**	✓			10%	**LE, SE**

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weightage	Type of Question
		9.1 Sensitivity, Specificity, Positive Predictive Value (PPV), Negative Predictive Value (NPV), ROC curve.					
Unit X	**1 hours**	**10. Format of scientific documentations** 10.1 Structure of research protocols, structure of thesis/research report, formats of reporting in scientific journals. Systematic review and meta-analysis.	✓			10%	**LE, SE**

Reference Books:

- Rao NSN: Applied statistics in health sciences, JP publishers
- Mahajan B.K: Methods of biostatistics, Kothari book depot, A.D Marg, Bombay
- Potti L.R: A text book of statistics, Yamuna publications, Sreekanteshwaram,

- Trivandrum.
- Lancaster H.O: Introduction to medical statistics, Johnwiley & sons, New York.
- Leius A.E: Biostatistics, Reinhold publishing Co, New York.
- Cotton T: Statistics in medicine, Little Brown & Co, Boston.
- Hill A.B: Principles of medical statistics, Oxford University press, New York

Course Title: Optometry Clinical Skills I

a. Practical I (Community Postings)

Course: Core

Credits: 4 **Number of Hours: 120**

Course Outcomes (COs): Optometry Clinical Skills I

After successful completion of this course, the learner will be able to:

CO1: Describe the role and scope of optometric services in community eye care and public health programs.

CO2: Perform basic and comprehensive optometric examinations in community camp settings using appropriate clinical protocols.

CO3: Apply clinical decision-making skills to identify, manage, and appropriately refer common ocular conditions encountered in community practice.

CO4: Demonstrate competence in the management of ocular conditions within the limits of community-based optometric care.

Course Content:

In this course students will be posted in various community camps and settings where they experience various aspects in diagnosis and management of Various ocular conditions under the supervision of experienced professionals and is expected to work and contribute in the community eye care.

2. Practical II

Credits: 4 **Number of Hours: 120**

Course Outcome

At the end of the course, students will be able to

CO 1- accurately diagnose anterior segment ocular diseases, apply appropriate clinical decision-making skills, and effectively manage or co-manage these conditions in collaboration with other eye-care professionals using evidence-based practices.

Course Content:

- **Course Content:**

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage
Unit I	30 hrs	Ability to perform clinical decision making for Ocular abnormalities		✓		40%
Unit II	90hrs	Ability to perform and interpret corneal diagnostics 2.1To demonstrate Topography/Pentacam/Orbscan	✓			60%
		2.2. To perform and interpret Specular microscopy	✓			

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage
		2.3. To perform and interpret Pachymetry		✓		
		2.4 . To perform and interpret A-Scan	✓			
		2.5 . To perform and interpret Abberometry		✓		
		2.6 . To perform and interpret AS OCT UBM		✓		

3. Practical III (Clinical Rotation)

Credits: 4 **Number of Hours: 180**

Course Outcome:

CO 1-Upon completion of the course, students will be able to understand and apply principles of diagnosis, clinical decision-making, management, and co-management of anterior segment ocular diseases to deliver appropriate and ethical patient care.

Course Content:

In this course students will be posted in various clinical settings of the Ophthalmology OPD and the student will get experience in various aspects in diagnosis and management of various ocular conditions under the supervision of experienced professionals and is expected to work and contribute in the unit.

SEMESTER II

Course Title: Ocular Diseases and Diagnostics II

Course: Core

Credits: 3 Number of Hours: 45

Course Outcomes (COs):

After successful completion of this course, the learner will be able to:

CO1: Apply evidence-based principles to diagnose posterior segment ocular diseases using appropriate clinical examinations and advanced diagnostic investigations.

CO2: Demonstrate sound clinical decision-making skills in the management and co-management of posterior segment disorders based on current best evidence.

CO3: Interpret posterior segment clinical findings to formulate differential diagnoses and appropriate management plans.

CO4: Critically analyze scientific literature and peer-reviewed journals to support evidence-based practice in posterior segment disease management.

Course Content:

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
Unit I	15 hrs	**Posterior Segment Ocular Diseases** 1.1Refresher of posterior segment ocular diseases, diagnosis and therapeutics	✓			40%	LE, SE
		1.2 Neuro optometric diseases and disorders	✓				
Unit II	30hrs	**Posterior Segment Diagnostics** 2.1. ERG	✓			60%	LE, SE
		2.2 EOG	✓				
		2.3. VEP	✓				

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
		2.4 OCT	✓				
		2.5 FUNDUSPHOTOGRAPHY	✓				

❖ **LE-** Long Essay**, SE-** Short Essay

➢ **Reference Books**

3. Kanski JJ, Bowling B. Kanski's clinical ophthalmology e-book: a systematic approach. Elsevier Health Sciences; 2015 Mar 24.
4. Grosvenor TP. Primary care optometry. Elsevier Health Sciences; 2007

Course Title: Advanced Contact Lens

Course: Core

Credits: 3 **Number of Hours: 45**

Course Outcomes (COs):

After successful completion of this course, the learner will be able to:

CO1: Explain corneal physiology and oxygen requirements and apply this knowledge to select appropriate contact lens materials and designs for various ocular conditions.

CO2: Evaluate, diagnose, and manage contact lens–related ocular complications using evidence-based clinical protocols.

CO3: Perform specialized contact lens fitting for compromised corneas, including keratoconus and other corneal irregularities.

CO4: Apply appropriate fitting philosophies and clinical principles of orthokeratology for refractive correction and myopia control.

- **Course Content:**

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
Unit I	10 hrs	**Basics of Cornea& Contact Lens** 1.1 Brief Study on Anatomy and Physiology of the Cornea and related Structures	✓			20%	LE, SE

		1.2 Study on Soft and Rigid gas permeable contact lens materials	✓				
		1.3 Detailed Study on care and maintenance of contact lens		✓			
		1.4 Brief study on effect on tears in contact lens use					
Unit II	10hrs	**Refresh to Contact Lens Fitting** 2.1. Detailed study on Optics and Lens Design	✓			40%	LE, SE
		2.2 Brief study on Clinical Instrumentation in contact lens practice	✓				
		2.3. Detailed study Rigid Gas Permeable corneal lens fitting- static and dynamic fitting	✓				
		2.4. Detailed study soft contact lens fitting- pre fitting and fitting assessment		✓			

		2.5. Detailed study Toric contact lens fitting- stabilization techniques	✓				
		2.6. Detailed study on lens care and regimen		✓			
		2.7. Brief study on contact lens standards			✓		
		2.8. Detailed study on Modification and verification of contact lens		✓			
		2.9. Detailed study on contact lens complication	✓				
Unit III	30hrs	**Speciality Contact Lens Fitting** 3.1. Introduction on Special types of Contact lenses – diagnosis, surgery, protective, therapeutic, sports, partially sighted		✓		40%	LE, SE
		3.2. Revision on Extended and Continuous wear	✓				

		Lenses					
		3.3. Detailed study on Scleral Contact lenses		✓			
		3.4. A brief study on Bifocal and Multifocal contact lenses		✓			
		3.5 Detailed study on Orthokeratology	✓				
		3.6 Detailed study on Keratoconus		✓			
		3.7 A brief study on Post refractive surgeries contact lens fitting			✓		
		3.8 Revision on Paediatric contact lens fitting		✓			
		3.9 Detailed study on Cosmetic and prosthetic contact lens fitting		✓			

		3.10 A detailed study on Contact lens and Myopia control	✓				
		3.11 Brief study Legal issues and contact lenses	✓				
		3.12 Brief study on Contact lens manufacturing Techniques		✓			

❖ **LE**- Long Essay**, SE**- Short Essay

Reference Books:

1. New ICLC modules (Vol. 1 to 5) by International Association of Contact Lens Educators, Australia
2. Efron N. Contact lens practice and a very soft option. Clinical and Experimental optometry. 2000 Sep 1;83(5):243-5.
3. Bennett ES, Weissman BA, editors. Clinical contact lens practice. Lippincott Williams & Wilkins; 2005.Contact Lenses- Anthony J. Phillips, Lynne Speedwel

Course Title: Bioethics

Course: Core

Credits: 3 Number of Hours: 45

Course Outcomes (COs): Bioethics

After successful completion of this course, the learner will be able to:

CO1: Explain the importance and scope of bioethics in healthcare practice and clinical research.

CO2: Describe and interpret core ethical principles and major ethical theories relevant to health sciences.

CO3: Identify ethical issues arising in healthcare settings and propose appropriate, ethically sound solutions.

CO4: Analyze ethical dilemmas in specific clinical scenarios using structured ethical decision-making frameworks.

Course Content

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weightage (%)	Type of Questions
I	5	**Introduction to bioethics** 1.1 Definition and scope of bioethics	✓			10	LE, SE
		1.2 History of bioethics		✓			
		1.3 Codes of ethics	✓				
II	5	**Ethical principles and theories** 2.1 The ethical principles	✓			30	LE, SE
		2.2 Ethical theories and their	✓				
		2.3 Application of ethical theories and principles in healthcare	✓				

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weightage (%)	Type of Questions
III	10	**Ethics in healthcare** 3.1 Consent	✓			20	LE, SE
		3.2 Risk: benefit analysis	✓				
		3.3 Distributive justice		✓			
		3.4 Privacy and confidentiality	✓				
		3.5 Stigma and discrimination		✓			
		3.6 Health technology assessment			✓		
		3.7 Public health ethics			✓		
IV	15	**Specific ethical issues in healthcare** 4.1 End of life care and euthanasia	✓			10	SE

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weightage (%)	Type of Questions
		4.2 Artificial reproductive techniques			✓		
		4.3 Medical termination of pregnancy		✓			
		4.4 Pre-natal sex determination		✓			
		4.5 Organ donation		✓			
		4.6 Medical errors and truth telling	✓				
		4.7 Medical negligence and malpractice	✓				
V	10	**Research ethics** 5.1. Research ethics principles	✓			30	LE, SE
		5.2. Informed consent	✓				

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weightage (%)	Type of Questions
		5.3. Vulnerability in research	✓				
		5.4. Responsible conduct of research	✓				
		5.5. Publication ethics	✓				

❖ **LE**- Long Essay**, SE**- Short Essay

Reference Books:

1. English DC. Bioethics a Clinical Guide for Medical Students.
2. TayaoeM.C.Textbook of Medical Bioethics, Attitude and Communication for Medical Students; 2016 Feb 28
3. Princy Louis Palatty. A Textbook of Bioethics for Healthcare Professionals 1st Edition; 2018

Course Title: Optometry Clinical Skills II

a. Practical I

Course: Core

Credits: 4 **Number of Hours: 120**

Course Outcomes (COs): Optometry Clinical Skills II
(Practical I)
After successful completion of this course, the learner will be able to:
CO1: Perform comprehensive clinical evaluation and diagnostic procedures for posterior segment ocular diseases.
CO2: Apply sound clinical decision-making skills in the management and co-management of posterior segment disorders based on clinical findings.
CO3: Demonstrate practical competence in identifying indications and contraindications for contact lens use in various ocular conditions.
CO4: Diagnose and manage ocular conditions using contact lenses as part of therapeutic and rehabilitative care.

- **Course Content:**

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage
1.		Posterior Segment Diagnostics	✓			**10%**
2.		Fundus examination using 90 D	✓			10%

3.	120 Hours	Fundus examination using Direct Ophthalmoscopy	✓			10%
4.		OCT	✓			10%
5.		Fundus Photography	✓			10%
6.		FFA	✓			10%
7.		Rigid Gas Permeable corneal lens fitting	✓			10%
8.		Soft contact lens fitting	✓			10%
9.		Toric Contact lens fitting	✓			10%
10.		Specialty Contact Lens Fitting	✓			10%

b. Practical II

Credits: 4 Number of Hours: 180

CO1: Students will be able to understand and apply principles of diagnosis, clinical decision-making, management, and co-management of posterior segment ocular diseases in clinical practice.

CO2: Students will be able to understand and apply principles of diagnosis, clinical decision-making, management, and co-management of ocular conditions using contact lenses for effective patient care.

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Course Content:

In this course students will be posted in various clinical settings of the Ophthalmology OPD and will get experience in various aspects in diagnosis and management of Various ocular conditions under the supervision of experienced professionals and is expected to work and contribute in the unit.

SEMESTER III

Course Title: Pediatric Optometry and Binocular Vision

Course: Core

Credits: 3 **Number of Hours: 45**

Course Outcomes (COs): Pediatric Optometry and Binocular Vision

After successful completion of this course, the learner will be able to:

CO1: Explain the fundamental concepts of visual perception and normal binocular vision development in pediatric patients.

CO2: Identify, evaluate, and classify binocular vision anomalies, including strabismic and non-strabismic disorders.

CO3: Perform comprehensive pediatric optometric examinations to assess binocular vision, ocular alignment, and visual function.

CO4: Formulate appropriate management and co-management strategies for strabismus, non-strabismic binocular vision disorders, and amblyopia based on clinical findings.

Course Content:

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
Unit I	10hrs	**Refractive Development** 1.1 Early Refractive Development	✓			15%	LE, SE

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
		1.2 Embryology	✓				
		1.3Infant Accommodation and Convergence		✓			
Unit II	5hrs	**Oculomotor function** 2.1. Conjugate Eye Movements of Infants	✓			15%	
		2.2. Development of the Vestibulo-ocular and Optokinetic reflexes	✓				LE, SE
Unit III	10hrs	**Spatial and Chromatic Vision** 3.1. Development of the Human Visual field	✓			15%	
		3.2. Development of Scotopic Retinal Sensitivity	✓				
		3.3. Infant Colour vision		✓			
		3.4. Orientation and Motion selective Mechanisms in Infants	✓				LE, SE
Unit IV	15hrs	**Binocular Vision** 4.1. Development of interocular vision in	✓			20%	

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
		Infants					
		4.2. Stereopsis in Infants and its developmental relation to visual acuity	✓				
		4.3. Sensorimotor Adaptation and Development of the Horopter		✓			
		4.4. Two stages in the development of Binocular Vision and Eye Alignment	✓				LE, SE
		4.5. Retinal and cortical Development		✓			
Unit V	10hrs	Paediatric Ocular Diseases	✓			20%	LA, SE
Unit VI	15hrs	**Clinical Applications** 6.1Assessment of Child Vision and Refractive Error	✓				
		6.2Refractive Routines in the Examination of Children	✓				LE, SE
		6.3 Cycloplegic refraction	✓				

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
		6.4 Color Vision Assessment in Children	✓				
		6.5 Dispensing for the Child patient		✓			
		6.6Pediatric Contact Lens practice			✓		
		6.7. Dyslexia and Optometry management	✓				
		6.8. Electrodiagnostic needs of Multiple handicapped Children			✓		
		6.9. Management Guidelines – Ametropia, Strabismus	✓				
		6.10. Management Guidelines –Amblyopia	✓				

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
		6.11. Accommodation and Vergence anomalies	✓				
		6.12. Nystagmus	✓				
		6.13. Common genetic problems in Paediatric optometry			✓		
		6.14. Ocular Trauma in Children		✓			
		6.15. Myopia control	✓				
		6.16. Clinical uses of prisms.	✓				

- **LE-** Long Essay**, SE-** Short Essay

Reference Books:

1. Johnson C. Clinical Management of Binocular Vision: Heterophoric, Accommodative, and Eye Movement Disorders.

2. Ciuffreda KJ. The scientific basis for and efficacy of optometric vision therapy in non-strabismic accommodative and vergence disorders.

Course Title: Vision Therapy

Course: Core

Credits: 3 Number of Hours: 45

Course Outcomes (COs): Vision Therapy

After successful completion of this course, the learner will be able to:

CO1: Explain the principles of binocular vision and visual efficiency relevant to identifying the need for vision therapy.

CO2: Assess binocular vision anomalies and functional vision problems using appropriate clinical tests and evaluation protocols.

CO3: Determine indications and contraindications for vision therapy based on comprehensive clinical findings.

CO4: Design and plan condition-specific vision therapy management programs tailored to individual patient needs.

Course Content:

Unit	Hrs	Content	Must Know	Good to Know	Desirable to	Weightage	Type Of Questions
Unit I	20hrs	Vision Therapy 1.1. Principles and Models of Vision therapy (VT)	✓			15%	LE, SE

Unit	Hrs	Content	Must Know	Good to Know	Desirable to	Weightage	Type Of Questions
		1.2. Non strabismic binocular vision disorders and VT	✓			15%	LE, SE
		1.3. Oculomotor dysfunction and VT	✓			15%	LE, SE
Unit II	25hrs	Advance Vision therapy (VT) 2.1. Amblyopia and VT	✓	✓		15%	LE, SE
		2.2. Behavioral disorders and VT	✓			15%	LE, SE
		2.3. Developmental, acquired Visual information processing disorders and VT	✓	✓		15%	LE, SE
		2.4. Evidence based practice in VT		✓	✓	10%	LE, SE

- **LE-** Long Essay**, SE-** Short Essay

Reference Books:

1. Scheiman M, Wick B. Clinical management of binocular vision: heterophoric, accommodative, and eye movement disorders. Lippincott Williams & Wilkins; 2008.
2. Evans BJ. Pickwell's Binocular Vision Anomalies E-Book. Elsevier Health Sciences; 2021 Jan 7.
3. Eom Y, Song JS, Ahn SE, KANG SY, SUH YW, OH J, KIM SH, KIM HM. Binocular vision and ocular motility: theory and management of strabismus Binocular vision and ocular motility: theory and management of strabismus, 21-25, 2002. Japanese journal of ophthalmology. 2013 Sep 1;57(5):486-92.
4. Scheiman M, Rouse MW. Optometric management of learning-related vision problems. Elsevier Health Sciences; 2006.

Course Title: Healthcare Management

Course: Core

Credits: 3 No. of Hours: 45

Course Outcomes:

CO1: Students will be able to understand the concepts of hospital administration and planning relevant to healthcare delivery systems.

CO2: Students will be able to identify and explain hospital workflows and various clinical services including OPD, IPD, ward management, operation theatre, emergency services, disaster management, and ICU.

CO3: Students will be able to understand organizational structures and effectively address human behavior–related challenges in the modern healthcare workplace.

CO4: Students will be able to understand and apply principles of quality management, including awareness of healthcare accreditation processes and their implementation in healthcare facilities.

Course Content;

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weight age	Type of Questions
I	4	**Hospital Structure** 1.1. Introduction to Hospitals, Healthcare & Medical Care, Rationale of Hospital Administration	✓			5%	SE
		1.2. History of Hospitals, Public Health Delivery system in India, Types of Hospitals, Voluntary Health Organizations			✓		
II	8	**Management of Healthcare Organizations** 2.1 Introduction to Management	✓			20%	LE, SE
		2.2 Evolution & Theories of Management		✓			
		2.3 Management Functions: Planning	✓				
		2.4 Organizing	✓				

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weight age	Type of Questions
		2.5 Controlling	✓				
		2.6 Decision Making	✓				
		2.7 Staffing	✓				
		2.8 Techniques in Management	✓				
III	7	**Organizational Behavior** 3.1 The Importance of Interpersonal Skills, Scope & Process of OB Structure & theories	✓			15%	LE, SE
		3.2 Motivation - Abraham Maslow's hierarchy of needs theory, Theory X & Y. Contemporary theories of motivation.	✓				
		3.3 Foundations of Group Behavior – Formal Vs Informal, Social Identity Theory		✓			
		3.4 Organizational Culture		✓			

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weight age	Type of Questions
		3.5 Communications in an Organization	✓				
IV	7	**Management and Health Economics** 4.1 Demand & Supply	✓			20%	LE, SE
		4.2 Nature of Costs	✓				
		4.3 Marginal cost and breakeven analysis	✓				
		4.4 Market structure: Business & Government, Role of Government	✓				
V	7	**Accounting for Hospital Management** 5.1 Budgeting & Budgetary control - Classification of budget, P & L, Balance Sheets	✓			20%	LE, SE

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weight age	Type of Questions
		5.2 Types of Accounts, Debit & Credit	✓				
		5.3 Financial Statement Analysis	✓				
VI	7	**Concept of Hospital** 6.1 Departmentation in Hospital	✓			10%	SE
		6.2 Outpatient, Inpatient Services	✓				
		6.3 Intensive Care Unit, Emergency Services	✓				
		6.4 Laboratory, Radiology	✓				
		6.5 Organizing of support services, Utility Services	✓				
		6.6 Evaluation of Hospital services – Hospital Statistics	✓				

Unit	Hrs	Content	Must Know	Good to Know	Desirable to Know	Weight age	Type of Questions
		6.7 Hospital Information Systems - Issues related to Healthcare technology, Planning, Infrastructure	✓				
VII	5	**Evolution of Quality management** 7.1 Quality Management Tools & methods	✓			10%	SE
		7.2 Quality certification & Accreditation – NABH, NABL	✓				

Text book/ Reference Books:

1 Prasad LM. Principles and practice of management. Sultan Chand & Sons; 2020 Oct 1

2 Robbins SP, Judge TA, Vohra N. Organizational behavior by Pearson 18e. Pearson Education India; 2019.

3 Sakharam B. M. Hospital planning & administration. Jaypee Brothers Medical Publishers Pvt. Limited, 2008 Dec 1.

4 Francis CM, De Souza MC. Hospital administration. Jaypee Brothers Medical Publishers; 2000.

5 Kulkarni GR, Satyashanker P, Anil Gomes L. Financial management for hospital administration. Jaypee Brothers Medical Publishers Pvt. Limited, 2009

Course Title: Optometry Clinical Skills III

a. Practical I

Course: Core

Credits: 4 **Number of Hours: 120**

Course Outcomes (COs): Optometry Clinical Skills III
(Practical I)

After successful completion of this course, the learner will be able to:

CO1: Perform comprehensive pediatric optometric examinations to evaluate ocular health, visual function, and binocular vision status.

CO2: Diagnose pediatric ocular conditions and binocular vision anomalies using appropriate clinical tests and age-appropriate assessment techniques.

CO3: Apply effective clinical decision-making skills in the management and co-management of pediatric ocular and binocular vision disorders.

Course Content:

Unit	Hrs	Content	Must	Good to	Desirabl	Weightage
Unit I	20hrs	1.1. Assessment of Child Vision and Refractive Error	✓			15%
		1.2. Cycloplegic Refraction	✓			15%
		1.3. Evaluation and diagnosis of Accommodation and Vergence anomalies	✓			25%
		1.4. Quantitative evaluation of strabismus	✓	✓		25%
		1.5. Qualitative evaluation of strabismus	✓			20%

b. Practical II

Credits: 4 Number of Hours: 180

Course Outcome:

Upon completion of the course, students will be able to understand and apply principles of diagnosis, clinical decision-making, management, and co-management of ocular conditions and binocular vision disorders to provide effective and evidence-based patient care.

Course Content:

In this course students will be posted in various clinical settings of the Ophthalmology OPD and the student will get experience in various aspects in diagnosis and management of various ocular conditions under the supervision of experienced professionals and is expected to work and contribute in the unit.

SEMESTER IV

Course Title: Low Vision Rehabilitation

Course: Core

Credits: 3 Number of Hours: 45

Course Outcomes (COs): Low Vision Rehabilitation

After successful completion of this course, the learner will be able to:

CO1: Explain the principles of low vision care and rehabilitation, including the functional impact of visual impairment.

CO2: Assess visual function and residual vision in individuals with low vision using appropriate clinical evaluation techniques.

CO3: Select and prescribe suitable low vision aids and functional assistive devices based on the patient's condition and rehabilitation needs.

Course Content:

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
Unit I	10 hrs	**Procedure related complications and their management** 1.1Visual impairment classification systems, basics of low vision care, Global, national and local policies	✓			10%	LE, SE
		1.2 Case based learning for common diseases leads to visual impairments	✓				
		1.3 Types of magnifications, Optical, Non optical and Electronic low vision devices		✓			

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
		1.4 Recent advancements in optical, non-optical and electronic low vision aids		✓			
Unit II	10hrs	**Rehabilitation** 2.1. Understanding the visual rehabilitation services	✓		✓	10%	LE, SE
		2.2 Counselling, Accessibility and Models of Low vision and rehabilitation care		✓			
		2.3 Rehabilitation of peripheral and central field defects by field expenders	✓				
Unit III	5 hrs	**Special conditions** 3.1 Paediatric low vision assessment	✓			20	LE, SE

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
		3.2 Orientation, mobility and daily living skills for visually impaired.					
		3.3 Educational approach and environmental modifications for visually impaired.		✓			
		3.4 Driving and low vision		✓			
		a. Community and hospital-based rehabilitation	✓				LE, SE
		b. Role of advanced ocular diagnostics in low vision care	✓				LE, SE

❖ **LE-** Long Essay**, SE-** Short Essay

Reference Books:

1. Brilliant RL, editor. Essentials of low vision practice. Butterworth-Heinemann; 1999.
2. Corn AL, Erin JN. Foundations of low vision: Clinical and functional perspectives. American Foundation for the Blind; 2010.

Course Title: Visual Neuroscience and Visual Psychophysics

Course: Core

Credits: 3 Number of Hours: 45

Course Outcomes (COs): Visual Neuroscience and Visual Psychophysics

After successful completion of this course, the learner will be able to:

CO1: Explain the fundamental mechanisms of visual perception including spatial vision, motion perception, and color vision.

CO2: Describe the functional anatomy and neurophysiology of the visual system and relate neural activity to visual perception and visually guided behavior.

CO3: Interpret the neural processing of visual information from retina to visual cortex using established neuroscience concepts.

CO4: Describe and evaluate experimental methods used in visual neuroscience, including psychophysics, electrophysiology, single-cell recording, and brain imaging techniques.

- **Course Content:**

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
Unit I	10 hrs	**Introduction to vision** 1.1 Brief Study on Physiological optics and photoreceptor mosaic	✓			10%	LE, SE

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
		1.2 Study Organization of retina and photo transduction	✓				
		1.3 Detailed Study on Fundamentals of visual psychophysics		✓			
Unit II	10hrs	**Introduction to Neurobiology** 2.1. Detailed study on Neuroanatomy of the brain: Principles of organization			✓	10%	LE, SE
		2.2 Brief study on Fundamentals of single cell electrophysiology: Action Potential, Membrane potential		✓			
		2.3. Detailed study on Electrophysiology	✓				
Unit III	5 hrs	**Basics of Electrophysiology** 3.1 Detailed study on Neurotransmitters	✓			20	LE, SE

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
		3.2 Brief study on Neurochemistry of the brain		✓			
		3.3 Brief study on Electrophysiology		✓			
Unit IV	15hrs	**Main Visual Pathway** 4.1 Introduction on Organization of lateral geniculate nucleus	✓			20%	LE, SE
		4.2. Revision on Spatial vision		✓			
		4.3 Detailed study on Spatial vision/ Contrast sensitivity		✓			
		4.4 A brief study on Organization of primary visual cortex		✓			
		4.5 Detailed study on Regulation of sensitivity	✓				

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
		and adaptation					
		4.6 Detailed study on Dark and Light Adaptation	✓				
		4.7 A brief study on Depth Perception	✓				
		4.8 Revision on Binocular vision and rivalry	✓				
		4.9 Detailed study on Stereoacuity/Binocular vision	✓				
		4.10 A detailed study on Motion pathways in vision		✓			
		4.11 Brief study on Temporal sensitivity			✓	**40**	
		4.12 Brief Organization of color in the visual brain		✓			

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
		4.13 Revision on Demonstration of color	✓				
		4.14 Detailed study on Clinical electrophysiology : Evoked potentials		✓			
		4.15 Detailed study on Electrophysiology: ERG/VEP	✓				
		4.16 Brief on Principles of imaging the brain			✓		
		4.17 Brief on Visual Illusions			✓		
		4.18 Brief on Developing the brain: Lessons from Evolution		✓			LE, SE
		4.19 Detailed study on Visual development and Embryology	✓				

Unit	Hrs	Content	Must Know	Good to Know	Desirable to know	Weightage	Type Of Questions
		4.20 Brief on Primary Visual Pathway disorders	✓				
		4.21 Introduction to Bionic vision: how does a computer see Clinical case reports			✓		
		4.22 Brief study on Extra striate visual disorders Eye movements		✓			
		4.23 Detailed study on Neural control of eye movements Pupillary pathway	✓				
		4.24 Discussion on Clinical case reports		✓			

❖ **LE-** Long Essay**, SE-** Short Essay

Reference Books:

1. Goldstein EB, Cacciamani L. Sensation and perception. Cengage Learning; 2021 Apr 23.
2. Schwartz SH. Visual perception: A clinical orientation. McGraw-Hill Medical Pub. Division; 2004.
3. Chalupa LM, Werner JS. The visual neurosciences, Vols. 1 & 2. MIT press; 2004.

Course Title: Optometry Clinical Skills IV

a. Practical I

Course: Core

Credits: 4 Number of Hours: 120

Course Outcome:

- CO 1Skills in evaluation, Diagnosis and Management of Non strabismic Binocular vision anomalies.
- CO 2 Student will acquire skill/knowledge in Diagnosis and Management of ocular conditions causing Low Vision.

Course Content:120 Hours

1. VT for Non strabismic Binocular Vision Anomalies
2. Complete Low Vision Workup

b. Practical II

Credits: 4 Number of Hours: 180

Course Learning Objectives:

CO1: To understand Diagnosis, Clinical decision Making, Management and co management of Low Vision and Non strabismus binocular vision anomalies.

Course Content:

In this course students will be posted in various clinical settings of the Ophthalmology OPD and the student will get experience in various aspects in diagnosis and management of various ocular conditions under the supervision of experienced professionals and is expected to work and contribute in the unit.

18. ANNEXURES

List of Annexures:

- ANNEXURE – I: Question Paper Layout for University Assessment of Theory Examination (Core)
- ANNEXURE – II: Logbook Format
- ANNEXURE- III: Journal Club Evaluation Sheet
- ANNEXURE- IV: Assignment Guidelines
- ANNEXURE- V: Seminar Assessment Rubric Template
- ANNEXURE- VI: Checklist OSCE & OSPE

ANNEXURE – I:

Question Paper Layout for University Assessment of Theory Examination (Core)

MODEL QUESTION PAPER

I Semester M.Sc. Technology

Time: 2 ½ Hours Max. Marks: 50 Marks

COURSE NAME: **QP Code:**

Your answers should be specific to the questions asked.

Draw neat labeled diagrams wherever necessary.

LONG ESSAY **(2x15=30Marks)**

1.

2.

SHORT ESSAY **(2x10=20Marks)**

3.

4.

MODEL QUESTION PAPER (for Jointly Offered Course)

I Semester M.Sc. Technology

Time: 2 ½ Hours **Max. Marks: 50 Marks**

COURSE NAME: **QP Code:**

Your answers should be specific to the questions asked.

Draw neat labeled diagrams wherever necessary.

Part A

LONG ESSAY **(1x15=15Marks)**

1.

SHORT ESSAY **(1x10=10Marks)**

2.

******

Part B

LONG ESSAY **(1x15=15Marks)**

1.

SHORT ESSAY **(1x10=10Marks)**

2.

******

ANNEXURE – II: Logbook Format

Yenepoya School of Allied Health Sciences

Constituent college of

Yenepoya (Deemed to be University)

University Road, Deralakatte

Mangalore – 575018

Master of Optometry

LOG BOOK

Academic Details

Name of the Student: _____

Campus ID: _____

Register ID: _____

E mail ID: _____

Ph. Number: _____

CERTIFICATE

This is to certify that the candidate Mr/ Ms …….,

Reg. No. ……., admitted in the year 2024 - 25 in the Yenepoya School of Allied Health Sciences, a constituent college of Yenepoya (Deemed to be University) has satisfactorily completed the requirements mentioned in this logbook for I semester Master of Optometry during the period from …… to…….

Signature of Clinical Coordinator

Name and Designation

Countersigned by Program Coordinator

Principal/Dean of the College

Place:

Date:

Master of Optometry

Seminar Class Assessment Form

Sl. No.	Date	Name of the Topic	T – L Method	Media Used	Faculty Remarks	Faculty Signature

YENEPOYA
(DEEMED TO BE UNIVERSITY)

Master of Optometry

Seminar Class Assessment Form

Sl. No.	Date	Name of the Topic	T – L Method	Media Used	Faculty Remarks	Faculty Signature

Master of Optometry

Journal Club Self-Assessment

Background and Overview	
Article Title/Citation	
Study Objectives or Purpose	
Background Brief summary of literature; study importance	
Relevance	
Is the studied outcome one that patients care about?	
Is the problem studied one that is common to your practice and the intervention feasible?	
Could study results require you to change your practice?	
Methods	
Study Design and Methodology Were patients randomized? Was everyone involved blinded? Was the study controlled?	
Patient Selection and Enrollment Inclusion/Exclusion criteria Were treatment and control groups similar study start? Were all patients accounted for at end of study?	

Outcome Measures/Endpoints Are outcomes appropriate? Primary and secondary outcomes? Composite or individual endpoints?	
Statistical Analysis How was data analyzed (e.g., intent-to-treat)? Were treatment groups of the appropriate size to detect a difference? Were statistical tests appropriate?	

ASSESSMENT

Continuous Internal assessment format for Optometry Clinical Skills III

Internal Assessment Components	Maximum Marks
Viva Voce	20
Case Studies/OSPE/OSCE	20
Spotters	10
Total Marks	**50**

CASE SHEET

Case No:

Posting:

MRD No:

Age/Sex:

Chief complaints:

Past Ocular History: **Current Medication:**

Past Medical History: **Recent Investigations:**

Family history:

Birth history:

Allergy history:

VISUAL ACUITY **DISTANCE** **NEAR**

OD **OS** **OD** **OS**

A) _____ Unaided

CASE SHEET

Case No:

Posting:

MRD No:

Age/Sex:

Chief complaints:

Past Ocular History: **Current Medication:**

Past Medical History: **Recent Investigations:**

Family history:

Birth history:

Allergy history:

VISUAL ACUITY **DISTANCE** **NEAR**

OD **OS** **OD** **OS**

B) _____ Unaided

C) _____ Visual Acuity with Pinhole

D) Previous Glass Vision

D) Previous Glass Power

	OD			OS		
	Spherical	Cylinder	Axis	Spherical	Cylinder	Axis
Distance						
Near						

Type:

Status:

E) Objective refraction:

GROSS : OD OS **NET :** OD OS

_____

Final power:

Auto Refractometer

OD:

OS:

F) Subjective Refraction:

OD & OS

	OD				OS			
	Spherical	Cylinder	Axis	VA	Spherical	Cylinder	Axis	VA

Distance								
Near								

ADD:

Remarks:

Types of Refractive Error:

	OD	OS
DIAGNOSIS		
Refractive Type		
Clinical Type		

G) Visual acuity with new correction: OD: OS:

a) Prefers new glasses b) Continue same PGP

KERATOMETRY: **OD** **OS**

_____ Vertical

_____ Horizontal

_____ Comments (Manual KR)

COVER TEST: **NPC**: SUBJ & OBJEC:

NPA: OD/OS/OU:

EOM:

WFDT: D **Stereopsis:**

N

PUPILLARY EVALUTION:

EXTERNAL EXAMINATION:

SLIT LAMP EXAMINATION: OD OS

TONOMETRY (mmHg): Method & Time:

GONIOSCOPY:

TBUT: OD: OS**:** **BLINK RATE:**

SCHIRMER'S TEST: OD: OS:

SYRINGING (duct): OD: OS: **ROPLAS**: OD:
OS:

DIALATATION INSTRUCTIONS:

FUNDUS: OD OS

DIAGNOSIS:

INTERVENTION PLANNED:

LEARNING:

OTHER PROCEDURE

SUMMARY:

SL NO.	MR NO.	PROCEDURE	INDEPENTED	OBSERVED	CHECK IN	CHECK OUT

Posting: OPTICALS

DISTANCE PD	OD	
	OS	
NEAR PD	OD	
	OS	
EFFECTIVE DIAMETER	OD	
	OS	
FITTING HEIGHT	OD	
	OS	

- # ANNEXURE- III: Journal Club Evaluation Sheet

Journal Club presentation evaluation sheet

Name of the student: Registration No.:

Programme: Name of the Evaluator:

Assessment Criteria			Marks Awarded
1	**Source & Relation of the Selected Article & Timely Circulation Marks: (0-10)**	Whether the article is peer-reviewed/indexed	**Marks: (0-10)** _____**x 1**
2	**Introduction, Literature Review & Objectives**	Hypothesis and/or objectives are very clearly presented with rationale.	**Marks: (0-10)** _____**x 1**
3	**Methodology**	All possible aspects of description of the research methods (research design, sampling, tools & procedure) of the paper presented with clear rationale & wide range of evidence clearly exhibiting excellent	**Marks: (0-10)** _____**x 1**

		knowledge on research methods.	
4	**Results and Discussion**	Results with tables and graphs are very clear and logically presented to answer the objectives of the presented paper. Excellent discussion of the research project with the integration of evidence presented analytically with very appropriate limitations of the study.	**Marks: (0-10)** **_____x 1**
5	**Conclusion**	Conclusion provided is specific and justified based on the findings of the study.	**Marks: (0-10)** **_____x 1**

6	**Critical appraisal of the Selected research study**	All the possible aspects of the paper were appraised with appropriate critical appraisal tool and the critiques presented analytically relating the strengths and weaknesses of the study. **Marks: (0-10)**	**Marks: (0-10)** **_____x 1**
7	**Presentation**	Flawless in the organization, alignment and structured arrangement of slides. Fluent and consistent while presenting the slides (Coherent and analytical explanation with reference to different areas of the article).	**Marks: (0-10)** **_____x 2**
8	**Journal Club Discussion**	Excellent and detailed attempt to rationalize for the answers given demonstrating analytical understanding at depth on the presented paper. Interaction with audience was enhanced throughout, focused, appraised & conclusive.	**Marks: (0-10)** **_____x 2**

	Comments if any:	**Total marks – (Max. Marks – 100)**

Date of Presentation: _____

Signature of the Evaluator:

ANNEXURE- IV: Assignment Guidelines

M.Sc. Programme

ASSIGNMENT GUIDELINES

- Each student has to submit one assignment in each of the core courses.
- The assignment topics need to be displayed on the **Yengage portal** by the 4th week of instruction of the semester (Dates specified in the Semester Planner)
- The assignment topic should be in correspondence with the topics covered in the 2 units of the syllabus.
- The students have to submit the assignments on the Yengage portal within 10 days of intimation. (Dates specified in the Semester Planner). After which, the assignments cannot be uploaded.
- The faculty needs to evaluate the assignment based on the evaluation rubric
- The assignment marks have to be displayed on the Yengage portal within 15days of submission (Dates specified in the Semester Planner)

Points to consider for the presentation of Assignment (for PGs)

- The word limit for the Assignment is 3,000 words or less.
- Should be presented in Times New Roman font, Size 12, with either double or 1.5 line-spacing, and page numbers beginning with 2 on the second page of the introduction.
- Assignment should include a title page and reference list (neither of which will be included in the assignment word count).

- Basic structure to be followed are as follows:
    - **Introduction** (10% of the assignment): This is where you introduce the topic and briefly explain the purpose of the assignment.
    - **Discussion** (80% of the assignment): This section is divided into a number of paragraphs. A paragraph usually starts with a topic sentence stating the main idea, followed by supporting evidence and examples.
    - **Conclusion** (10% of the assignment): this section briefly restates your main argument, evaluate your ideas and summaries your conclusions. Don't introduce any new information in this section.

Report Evaluation

Name of the student: _____

Program: _____

Course: _____

Assignment Topic: _____

Date of submission: _____

Faculty In charge: _____

Sl. No.	Assessment criteria	Marks Allotted	Marks Awarded
1	Title/Cover page	02	
2	Table of contents	02	
3	Organization of assignment	10	
4	Level of Content	03	
5	Pictures/diagrams	03	
6	Bibliography	02	
7	Grammar/Neatness	03	
Total points		25	

Grading Rubric for Written Assignment

Criteria	**Inadequate=D** **(Below Standard)**	**Adequate=C** **(Meets Standard)**	**Above Average=B** **(Exceeds Standard)**	**Exemplary=A** **(Far Exceeds Standard)**
Organization	Writing lacks logical organization. It shows some coherence but ideas lack unity. Serious errors.	Writing is coherent and logically organized. Some points remain misplaced and stray from the topic. Transitions evident but not used throughout essay.	Writing is coherent and logically organized with transitions used between ideas and paragraphs to create coherence. Overall unity of ideas is present.	Writing shows high degree of attention to logic and reasoning of points. Unity clearly leads the reader to the conclusion and stirs thought regarding the topic.
Level of Content	Shows some thinking and reasoning but most ideas are underdeveloped and unoriginal.	Content indicates thinking and reasoning applied with original thought on a few ideas.	Content indicates original thinking and develops ideas with sufficient and firm evidence.	Content indicates synthesis of ideas, in-depth analysis and evidences original thought and support for the topic.
Development	Main points lack detailed development. Ideas are vague with little evidence of critical thinking.	Main points are present with limited detail and development. Some critical thinking is present.	Main points well developed with quality supporting details and quantity. Critical thinking is weaved into points	Main points well developed with high quality and quantity support. Reveals high degree of critical thinking.

Grammar & Mechanics	Spelling, punctuation, and grammatical errors create distraction, making reading difficult; fragments, comma splices, run-ons evident. Errors are frequent.	Most spelling, punctuation, and grammar correct allowing reader to progress though essay. Some errors remain.	Essay has few spelling, punctuation, and grammatical errors allowing reader to follow ideas clearly. Very few fragments or run-ons.	Essay is free of distracting spelling, punctuation, and grammatical errors; absent of fragments, comma splices, and run-ons.
Style	Mostly in elementary form with little or no variety in sentence structure, diction, rhetorical devices or emphasis.	Approaches college level usage of some variety in sentence patterns, diction, and rhetorical devices.	Attains college level style; tone is appropriate and rhetorical devices used to enhance content; sentence variety used effectively.	Shows outstanding style going beyond usual college level; rhetorical devices and tone used effectively; creative use of sentence structure and coordination
Format	Fails to follow format and assignment requirements; incorrect margins, spacing and indentation; neatness of essay needs attention.	Meets format and assignment requirements; generally correct margins, spacing, and indentations; essay is neat but may have some assembly errors.	Meets format and assignment requirements; margins, spacing, and indentations are correct; essay is neat and correctly assembled.	Meets all formal and assignment requirements and evidences attention to detail; all margins, spacing and indentations are correct; essay is neat and correctly assembled with professional look.

- # ANNEXURE- V: Seminar Assessment Rubric Template

M.Sc. Programmes

Seminar Assessment

• A student shall deliver minimum one seminar from each core course per semester.
• The seminar topic shall be allotted by the faculty based on the course content.
• The faculty needs to evaluate the seminar based on the evaluation rubric given.

Rubric for Seminar Evaluation				
Assessment Criteria	**Exceeds Expectations**	**Meets Expectations**	**Below Expectations**	**Not Acceptable**
Score	**5**	**4**	**2**	**1**
Organization & Style	• Information is presented in a logical, interesting way, which is easy to follow.	• Information is presented in a logical manner, which is easily followed.	• Work is hard to follow as there is very little continuity. • Purpose of work is stated, but does not	• Sequence of information is difficult to follow. No apparent structure or

	• Purpose is clearly stated and explains the structure of work.	• Purpose of work is clearly stated assists the structure of work.	assist in following work.	continuity. • Purpose of work is not clearly stated.
Content & Knowledge	• Demonstration of full knowledge of the subject with explanations and elaboration.	• At ease with content and able to elaborate and explain to some degree.	• Uncomfortable with content. • Only basic concepts are demonstrated and interpreted.	• No grasp of information. Clearly no knowledge of subject matter. • No questions are answered. No interpretation made.
Format & Aesthetics	• Format is consistent throughout including heading	• Format is generally Consistent including heading	• Mostly consistent format. • Figures and tables are legible, but	• Work is illegible, format changes throughout, e.g. font

	styles and captions. • Figures and tables are presented logically and reinforce the text.	styles and captions. • Figures and tables are neatly done and provide intended information.	not convincing.	type, size etc. • Figures and tables are sloppy and fail to provide intended information.
Spelling & Grammar	• Negligible (1 or 2 per page) misspellings and/or grammatical errors.	• Minor (5 to 10 per page) misspellings and/or grammatical errors.	• Several spelling (11 to 25 per page) and grammatical errors.	• Numerous spelling (> 25 per page) and grammatical errors.
References	• Reference section complete and comprehensive. • Consistent and logical referencing system.	• Minor inadequacies in references. • Consistent referencing system	• Inadequate list of references or references in text. • Inconsistent or Illogical referencing system.	• No referencing system used.
Viva Voce	• Masterfully defends research by providing clear and insightful	• Competently defends by providing very helpful answers	• Answers questions, but often with little insight	• Does not answer

	answers to questions			

M.Sc. Programmes

Seminar Assessment Scoring Sheet

Name of the Student: **Registration No. :**

Class:

Rubric for Seminar Evaluation				
Assessment Criteria	**Exceeds Expectations**	**Meets Expectations**	**Below Expectations**	**Not Acceptable**
Score	**5**	**4**	**2**	**1**
Organization & Style				
Content & Knowledge				
Format & Aesthetics				
Spelling & Grammar				
References				
Viva Voce				

Total Score (Max Score – 30)	

Assessment done by:

Accessor Signature

ANNEXURE -VI CHECKLIST

OSCE Assessment Checklist

Criteria	Achieved	Not Achieved	Remarks
Station Preparation			
Instructions clear and visible	■	■	
Equipment and patient/simulator ready	■	■	
Examiner has marking scheme	■	■	
Time clearly indicated	■	■	
History Taking / Data Gathering			
Introduces self, confirms identity	■	■	
Explains purpose, seeks consent	■	■	
Uses open and closed questions	■	■	
Elicits relevant history	■	■	
Clarifies patient concerns/expectations	■	■	
Clinical Examination			
Washes hands / infection control	■	■	
Explains procedure to patient	■	■	
Performs exam systematically	■	■	
Uses instruments correctly	■	■	

Identifies key findings	■	■	
Clinical Reasoning			
Interprets findings accurately	■	■	
Suggests differential diagnoses	■	■	
Recommends appropriate investigations	■	■	
Proposes initial management plan	■	■	
Communication Skills			
Establishes rapport, maintains eye contact	■	■	
Uses clear, empathetic language	■	■	
Checks patient understanding	■	■	
Provides health education/counseling	■	■	
Professionalism			
Maintains patient dignity & confidentiality	■	■	
Respects patient's cultural/social background	■	■	
Demonstrates confidence without arrogance	■	■	

OSPE Assessment Checklist

Criteria	Achieved	Not Achieved	Remarks
Station Setup			
Station instructions clear & concise	■	■	
Required equipment/materials available & functional		■	
Adequate time allotted for task	■	■	
Standardized patient/simulator prepared	■	■	
Answer sheet/marking scheme ready			
Student Performance - Knowledge & Understanding			
Demonstrates understanding of concept	■	■	
Answers station-specific questions correctly			
Student Performance - Skills & Technique			
Performs steps in logical sequence	■	■	
Handles instruments/equipment correctly	■	■	
Maintains aseptic/standard precautions	■	■	
Completes task within allocated time			
Student Performance - Communication			

Explains procedure to patient/supervisor	■	■	
Uses appropriate medical terminology	■	■	
Seeks consent where required			
Student Performance - Professionalism			
Maintains patient respect & privacy	■	■	
Demonstrates confidence & ethical behavior			
Assessment & Scoring			
Structured checklist/marking scheme used	■	■	
Marks allocated for each step	■	■	
Negative marking avoided unless justified	■	■	
Examiner consistency ensured across students			
Logistics & Examiner Role			
Examiner briefed & calibrated before OSPE	■	■	
No coaching/hints given during station	■	■	
Feedback documented for student performance	■	■	