



**MAHARASHTRA UNIVERSITY OF
HEALTH SCIENCES**

REGIONAL CENTRE, AURANGABAD

**DEPT. OF COMMUNITY
OPHTHALMOLOGY**

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INFORMATION BROCHURE

**TWO YEAR CERTIFICATE COURSE IN
OPHTHALMIC ASSISTANT**

IMPORTANT INFORMATION AT GLANCE
TWO YEAR CERTIFICATE COURSE IN OPHTHALMIC
ASSISTANT

- NOTE:-** 1) Day, Date & Time of Entrance Examination.
2) Entrance Examination centre.
3) Declaration of Result/Merit list.
4) Date of Selection process (Counselling & Admissions).
5) Venue of Selection Process (Counselling & Admissions etc will be inform separately).

TWO YEAR CERTIFICATE COURSE IN
OPHTHALMIC ASSISTANT

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1) Introduction

The purpose of the course is to develop an ophthalmic manpower at primary eye care level. This training will enable a student to become a competent person in providing service as an optometrist, Refractionist and Ophthalmic Assistant to the community in urban, semi-urban & rural setting in private, semi – Governmental and Governmental sectors. The trainee on the completion of the course would besides functioning primarily as an (vision care professionals) Ophthalmic Assistant, Optometrist and Refractionist would also perform various tasks at all levels.

Blindness is a major public health problem in India according to WHO there are 10 million blind and visually disabled nearly 80% of blindness is avoidable if there is adequate eye care professionals at primary, secondary, tertiary level.

“Vision 2020” right to sight and National programme for control of blindness commitment to eliminate avoidable blindness by the year 2020, there is urgent need of 75000 vision care professionals to establish vision centers at primary eye care level in India.

2) Aims & Objectives

- To prepare the students to provide primary eye care in vision centers, eye hospitals. Eye care health units, etc. as Ophthalmic Assistant. Optometrists, Orthoptists and Refractionists .
- To enable the students to get themselves self employed as Ophthalmic Assistant, Optometrists and Refractionists or vision care professionals .
- To enable the students to estimate errors of refraction and be able to prescribe glasses.
- To enable the students to perform common ophthalmic diagnostic procedures and common eye procedures.
- To enable the students to maintain ophthalmic appliances and instruments.

- To enable the learners to conduct eye care surveys, research in community ophthalmology.
- To enable students to participate the health education, counseling, and health promotion activities.

3) Eligibility

- The candidate should have passed class 12 examination of CBSE or equivalent examination with physics, chemistry, and biology with at list 45% marks in the aggregate.
- Candidate who has passed vocational 12 th class examination in ophthalmic technician course of any board from the vocational stream.

4) Duration

The course is of two years (four semesters) duration full time.

5) Language of Course English

6) Total Number of Seats : 30 per year.

(Reservations as per State Government Rules.)

7) Nature of Course Community Ophthalmology, Full time course.

8) Fee Structure Rs. 15,000/- per Semester.

(for 4 semester Rs .60,000)

1. Following attested photocopies are required to be submitted along with the application from:

1. Nationality Certificate OR Valid Passport
2. SSC Board Certificate (Certificate of age).
3. HSC Mark sheet.
4. Equivalence Certificate from A.I.U. for NRI (if applicable)
5. Physical fitness Certificate.
6. Bonafide Certificate from Dean/Principle of the college
(if applicable) OR Gap affidavit on stamp paper of Rs. 20/-

7. College leaving Certificate (Transfer Certificate)
8. Certificate of additional Qualifications.
9. Affidavit for change of Name (Marriage Certificate/copy of Govt. Gazette if applicable)
10. Caste Certificate.
11. Caste Validity Certificate.
12. Creamy layer Certificate.
13. Migration Certificate issued by respective Board/University (if applicable).

1	Exam Fee	1,000/-
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- **Student will have to pay examination fees and any other fees applicable as per the latest changes made by MUHS.**

9) Refund of the Fees:- (Subject No.94/2007)

- The Student who taken admission to the “Two Year Certificate Course in Ophthalmic Assistant” the fee should be deducted as per following act (MUHS Act No. 94/2007)

Sr.No.	Period of Cancellation	Permissible Deductions
1.	Within 15 days from the date of admission	10,000/-
2.	Within 30 days from the date of admission	5,000/-
3.	After 30 days from the date of admission	No refund

10) Application form & Information Brochure

1) Information Brochure along with blank Application form is available on the University Website(WWW.Muhsnashik.com). The candidates are requested to download the application form and send it along with a D.D. of Rs. 500/- per in favor of “Registrar MUHS, Nashik”. D.D. should be drawn on any Branch of Nationalized Bank Payable at Nashik. The envelop should be superscripted with “two year Certificate Course in Ophthalmic Assistant”.

2) The application form must be filled by the candidate in his/her own handwriting using black ball point pen and submit it own or before last date of submission of the application forms on the following address.

11) Scheme of Entrance Examination (Screening Test)

Syllabus & rules for Entrance Examination:-

Multiple Choice questions shall be based on the General Knowledge related to health sciences.

- ❖ Students have to appear for objective type Entrance Examination.
- ❖ The Examination will be conducted at Nashik.
- ❖ Date of Examination, Time & Venue shall be informed on University website.
- ❖ Language of Entrance Examination shall be English.
- ❖ The Examination shall consist of common objective type question paper of 100 marks containing 50 questions, and duration of Examination shall be one hour.
- ❖ The candidate will be required mark the correct answer by black /blue ball point pan in the given objective question booklet .
- ❖ Each correct will be given two marks . there shall be no negative marking .
- ❖ Scratching , overwriting , multiple answerers will be considered as wrong answers and no marks will be allotted to them .

12) Declaration of result / merit list :

Merit list shall be prepared of only those candidate securing 50% or more marks in open category and 45% or more marks in reserve category .The merit list will displayed on the university website .

Tie –Breaker :

In case of equal mark in Common Entrance Test the following procedure shall be adopted for deciding the merit..

First Level : the candidate with more aggregate marks (converted in to % up to two decimal points) at HSC .

Second Level : if the tie still persists then an older candidate will be preferred over the young candidate .

13) Selection process :

- The candidate will be called for interview as per category wise merit list
- Date of interview will be informed on the website.
- The allotment of seats shall be made to the successful candidate as per merit list .Merit list will be prepared in accordance with the State Govt. rules / norms .
- The candidate will not appear for the interview on the notified date in person his selection shall be considered as canceled and such candidate shall lose his seat.
- Eligibility of candidate will be finalized after verification of all original documents.
- The candidate is required to take admission within one week of issuing a letter of selection, he has to pay the fees as mentioned in point no. 8 .
- Seats that have been fallen vacant shall be filled in subsequent rounds and display on the notice board of university and the official web site.
- Decision of selection committee shall be final.

14) Disqualification for Admission :

- A candidate who has already taken admission in to course in other subject or faculty will not be eligible for admission .
- Selected candidates who have cancelled there admission or do not take admission within stipulated period they shall not be eligible for admission in future .

15) Attendance :

- 80 % attendance is compulsory failing which students will not allowed appearing for the examinations. Doctor certificate is necessary if absence is due to illness.

16) Accommodation :

Students have to make their own residential arrangements when they are posted .

17) Conduct of Course:-

- The Candidate admitted in this fulltime course shall have to remain in institute for full day.
- The candidate admitted in this course will not be allowed to work in any other institute or will not be allowed to work as a medical practitioner part/full time
- The student while studying in this course, if found indulging in antinational activities, unlawful activities or reigning in any form, will be label to expelled form the dept. by the competent authority.
- It is responsibility of each student to have proper documents.

18) Certificates

After successful completion of the course, certificate shall be awarded by the Maharashtra University of Health Sciences, MUHS (Nashik)

Two year certificate course in Ophthalmic Assistant.

19) Teaching Schedule, Modules and Evaluation:

Semester wise theory and practical examination shall be conducted by the University Dept. in Community Ophthalmology at Regional Centre Aurangabad in each form six month

20)Academic Calendar of the course :

Sr. No.	subject	Theory (hrs.)	practical (hrs.)
Year I semester - I			
1.	Anatomy & Physiology & Biochemistry	100	80
2.	Ophthalmic, Geometrical & Physiological Optics	100	80
3.	Optics & Refraction	100	80
4.	Ophthalmic Diagnostic Procedures	100	80
Semester - II			
1.	Ocular Eye diseases & Primary Eye Care	100	80
2.	Micro Biology pathology & Pharmacology	100	80
3.	Minor surgical Procedures & Theater mgt.	100	80
4.	Hospital Procedures & patient care & Medical Records	100	80
Year II- semester-III			
1.	Community Ophthalmology	100	80
2.	Low Vision Aids & Rehabilitation	100	80
3.	Contact Lenses & Dispensing Optic	100	80
4.	Ophthalmic Diagnostic equipments	100	80
Semester IV			
1.	Public Health & Community Optometry	100	80
2.	Pediatric Optometry	100	80
3.	Optometry profession Health Education, Public Relation	100	80
4.	Project work		200
		Total	1500 hrs
			1400hrs

N0. Of lecture hours (1500 hrs) + practical and Hospital visits and projects 1400 hours .

Total hours = 2900 hrs.

21) Infrastructure

Facilities Available

Hospital Training at attached hospital, Dispensing units & other units.

Teaching Staff at Dept. of Community Ophthalmology

- Director Professor 01
- Associate Professor 02
- Lecturer 01
- Medical Officer 01

Technical Staff -

- Ophthalmic Assistant 01
- Senior Research Officer 01
- Junior Research Officer 01

➤ Library Facility (Conventional)

22) Core Curriculum & Syllabus

Semester-1

Paper I- Anatomy & Physiology, Biochemistry

1.1 Human Anatomy with special senses. Parts of body organs of special centers.

1.2 Bony orbit and ocular adnexa, ocular muscle and cranial nerve

1.3 Gross, anatomy of coats of eye ball cornea, sclera, Urea, Retina, Lens and vitrous.

1.4 Physiology of eye ball, physiology of vision, color vision, ocular movements
And Binocular vision

1.5 Accommodation & Convergence, formation & circulation of acquus & lacrimal
Fluids

1.6 Basic Biochemistry, function of cells and tissue, introduction to carbohydrates,
proteins and lipids, enzymes, vitamins & minarels.

1.7 Harmons & metabolic regulation, clinical Biochemistry, ocular biochemical
aspects. Vitrous, Cornea, Lens Aqueous, Vitrous, Retina.

Paper II- Ophthalmic & Geometrical, physiological optics.

- 2.1 Nature of light, Laws of Refraction, Optical aberrations of ophthalmic glasses.
- 2.2 Optics of the human Eye & refractive error.
- 2.3 Myopia, hypermetropia, aphakia & its correction.
- 2.4 Astigmatism, Presbiopia, aphakia & its correction.
- 2.5 Ophthalmic lenses and new trends
- 2.6 Photometry, fiber optics, colour theory,
- 2.7 Refractive anomalies & their cause.

Paper III –Optics & Refraction

- 3.1 Various Components of vision, principle OK testing for visual acuity.
- 3.2 Distant, Near, Color vision.
- 3.3 Radioscopy & Subjective correction.
- 3.4 Measurement of IPD, Fitting & Adjustment of spectacle.
- 3.5 Decentring, Bifocals, Segment heights and transposition of lenses.
- 3.6 Checking of spectacles.
- 3.7 Types of glass, key and new trends in ophthalmic glasses.
- 3.8 Visual field.
- 3.9 Demonstration & Practical problems in refraction.

Paper IV– Ophthalmic Diagnostic Procedures.

- 4.1 History, Visual acuity testing ocular motility examination, eye examination, slit lamp, LOP, Gonioscopy, Ophthalmoscopy, Examination of lacrimal system, orbit, macular function testes, visual field charting.
- 4.2 Refractive Instruments, Retinoscope, Optometers, Lensometer, slit lamp, tonometer, fundus camera, keritometer, orthopticism instruments, colour vision.
- 4.3 Direct & Indirect ophthalmoscopy.

SEMISTER II

Paper – I Ocular eye Disease & Primary Eye Care

- 5.1 Common Eye Diseases, types of conjunctivitis including trachoma, corneal ulcer & opacities, Iritis, cataract, lids and lacrimal sac eye emergencies, Eye injuries, first aid and treatment, Glaucoma, Squint, Systemic disorders, screening and prevention of blindness & visual impairment.
- 5.2 Role of Ophthalmic Assistant, Ophthalmic in primary eye care.
- 5.3 Blindness in adult, children and primary care.

Paper -II Microbiology, Pathology & Pharmacology.

- 6.1 Introduction to the various organism responsible for diseases & Bacteria, virus and fungi.
- 6.2 Techniques of conjunctival smears, culture, scraping and asepsis.
- 6.3 Infection & their prevention routes, cross infection, antiseptic and asepsis.
- 6.4 Examination of urine Gross – Albumin Sugar.
- 6.5 Clinical pathology, staining laboratory tests
- 6.6 Various method of drugs in Ophthalmic diseases.
- 6.7 Various side reactions of common Ophthalmic drug anesthesia, mitosis, midrasis.
- 6.8 Primary Prevention.

Paper– II Minor Surgical procedures & theatre management.

- 7.1 Installation of eye drops and subconjunctival injection, fomentation, irrigation, epilation, syringing.
- 7.2 Minor Surgical procedures, nursing care, laying of trolley for surgery. O.T. Techniques.
- 7.3 Asepsis, Fumigation, sterilization of instruments.
- 7.4 Making, Swab, Stricks, pads and preparation of drums and autoclaving.
- 7.5 Laying of trolley for surgery, cataract, glaucoma, sac, pterygium, chalazion, entropion and squint.
- 7.6 Preoperative and post operative care.
- 7.7 Innovation in Ophthalmic surgery.

Paper – IV Hospital Procedures & Medical Records.

- 8.1 Diseases Index, alphabetic index, numerical index, Major & Minor surgical records.
- 8.2 Funds, Administration, correspondence, Accounts, use of Computers, management of community eye services.
- 8.3 Basic Accountancy, cash book, sales, purchase register, ledger, Bank reconciliation.

YEAR -2 SEMISTER –II

Paper – I – Community Ophthalmology.

- 9.1 Principle & Philosophy of public health and community ophthalmology.
- 9.2 Epidemiology, Health Care, System, National Programme for control of Blindness, vision 2020 right to sight.
- 9.3 population based surveys, screening procedures.
- 9.4 Role of primary eye care professionals in vision 2020.
- 9.5 Impact of eye diseases on community.
- 9.6 Organization, arrangements & management of community eye care services.

Paper – II : Low Vision Aids & rehabilitation.

- 10.1 Identifying & Evaluation of low vision patient.
Refraction and optical, low vision Aids.
- 10.2 Low vision care & rehabilitation.
- 10.3 Case Management & Diagnostic procedures in low vision.
- 10.4 Low vision Aids & orthoptic exercise.
- 10.5 Rehabilitation and Counseling.

Paper – III Contact lenses and Dispensing Optics.

- 11.1 History and Development, types of cataract lenses, fitting of contact lenses.
- 11.2 Toric Contact lenses, bifocal lenses, dispensable contact lenses.
- 11.3 Specialty of contact lenses, complications of contact lenses, contraindication.
- 11.4 Dispensing optics, surfacing & polishing, lens, faults, inspection, marking & edging of bifocal lenses, multifocal lenses, progressive lenses.
- 11.5 Selection of frames, IPD measurement.

Paper – IV – Ophthalmic Instruments.

12.1 Trial set, slit lamp, Focimeter, Lensometer, Retinoscopy, Optometers, Ophthalmoscope.

12.2 Tonometer, Keritometer, Refractometer.

12.3 Innovation in Ophthalmic equipment.

SEMISTER-IV

Paper – I Public Health & Community Optometry.

13.1 Philosophy of Public health, impact of Blindness on Society, organization of eye camps.

13.2 Arrangements of Refractive camps, Intraction with voluntary organization.

13.3 Screening programme & referral.

13.4 Community based Rehabilitation.

13.5 Occupational & law & Optometry, optometry profession in India & abroad.

13.6 Data Collection & school surveys ,working with community.

Paper- II Pediatric Optometry.

14.1 Examination & Diagnosis visual defects in children.

14.2 Refractive status, ocular motility Examination.

14.3 Normal appearance, pathology and structural anomalies of orbit, eye lids, Lacrimal systems, conjunctiva, ROP , rehabilitation.

14.4 Childhood Blindness & role of vision care professional.

Paper- III Optometry Profession & Health Education & Public Relation.

15.1 Primary eye Care Profession in India, Lincensure, Ethics, laws, New Involution in optometry profession.

15.2 Eye health education, screening programme in school children, eye health Education in industrial workers.

15.3 working with individual & Community.

15.4 Public relation, Definition, tools, definition & process of communication.

15.5 Working for News Papers, Radio, TV, Public relation with organizations, employee, customer, Community, Welfare agencies, Health agencies, Hospital, Publicity tools & Techniques.

Paper- IV Project Work

Practical Training :

- 1.1 Visual acuity, near vision, colour vision, visual field, central peripheral.
- 1.2 Identification of lenses, spherical, cylindrical, prism, neutralization, Lensometry, Retinoscopy.
- 1.3 Subjective verification Aphakia, Myopia, hypermetopia, distimayytism, children, pretiopia.
- 1.4 Measurement of IPD centering and decent ring.
- 1.5 Common eye diseases prevention and recognition conjunctives, corneal ulcer, red eye, eye sings in malnutrition, VAD, Glaucoma, cataract, squint.
- 1.6 Lensometry, keritometry, Autorefractometer.
- 1.7 Nursing care and laying of trolleys, Dressing.
- 1.8 Cleaning & sterilization of instruments, fumigation, Swab, pads, drums, autoclaving.
- 1.9 Screening schools and in community.
- 1.10Cases screened, Referral etc.
- 1.11O.T. wards. OPD arrangements.
- 1.12Community eye care programs.

23) Nomenclature of Papers & Marks

General Exam Structure for Diploma in Ophthalmic Assistant.

Sr. No.	subject	Theory	practical Viva	Total
Year I semester - I				
1.	Anatomy & Physiology & Biochemistry	100	100	200
2.	Ophthalmic, Geometrical & Physiological Optics	100	100	200
3.	Optics & Refraction	100	100	200
4.	Ophthalmic Diagnostic Procedures	100	100	200
Semester - II				
1.	Ocular Eye diseases & Primary Eye Care	100	100	200
2.	Micro Biology pathology & Pharmacology	100	100	200
3.	Minor surgical Procedures & Tehature mgt.	100	100	200
4.	Hospital Procedures & patient care & Medical Records	100	100	200
Year II- semester-III				
1.	Community Ophthalmology	100	100	200
2.	Low Vision Aids & Rehabilitation	100	100	200
3.	Contact Lenses & Dispensing Optic	100	100	200
4.	Ophthalmic Diagnostic equipments	100	100	200
Semester IV				
1.	Public Health & Community Optometry	100	100	200
2.	Pediatric Optometry	100	100	200
3.	Optometry profession Health Education, Public Relation	100	100	200
4.	Project work		100	200
Total Marks				<u>3200</u>

24) Examination Scheme

Two year certificate in Ophthalmic Assistant will be conferred to a participant who succeed in University Examination by obtaining 40% marks in each heading.

- a) Written Examination (four papers 100 marks for each paper (Total marks 400) for each semester.
- b) Practical Examination + Oral = 400
- c) Project Work will start at the end of fourth semester.(200 marks)

PASSING CRITERIA

	Theory		Practical		Work Book
	Objective	Descriptive	Practical	Viva	
Distribution Marks	50% Questions	50% Questions	70% Questions	30 Questions	
Passing	40%	40%			
Aggregate	50%		60%		50%

25) Future Prospects

This course will help the candidate to develop career and choice in future in view of vision 2020 right to sight , National blindness control project, The Government of Maharashtra urgently require vision care professionals to develop “vision centers” in rural and urban area for the Hospitals, Dispensaries and Primary Health Centers functioning in State of Maharashtra. It is necessary to make available trained professionals to provide to these centers. Candidates will have an excellent opportunity to acquire a **University Certificate** which will provide a platform to step into the Ophthalmology world or enter into the field of National or International research or work in private or NGO eye care centers.

26) Future Plans (Community Ophthalmology)

In coming years, community ophthalmology is a planning to start following courses

- 1) Bachelor degree course in ophthalmic science.
- 2) PG Course in community ophthalmology.
- 3) Ph.D in community ophthalmology.

27) Reference Books

Name of Books	Author
1) Pediatric Ophthalmology	Harly (vol-I & II)
2) Atlas Disease of the Eye	Parkins
3) Fundamentals of Ophthalmology	Kirwani
4) Clinical Refraction	Borish
5) Cosmetic Contact Lens & Artificial eyes	Kumar & Krishna
6) Strabismus	Rinke, Millon
7) Clinical Low Vision	Eleanor
8) Ophthalmic Diagnostic Procedures	Nima
9) Contact lenses	Jamct Stones
10) The Human Eye in Anatomical Tranpencies	Peter
11) Principles & Practice of Community Ophthalmology	Dr. Murthy
12) Anatomy of Orbit	Cowell Brard
13) Microbiology of the Eye	Led Suie
14) Low Vision	Monica Choudhary
15) Contact Lenses	Monica Choudhary
16) Practice of Refractions	Dake Elders
17) Modern Ophthalmology	L.C. Datta
18) Blindness Survey	IAPB
19) Practical Orthoptics in treatment of squint	Kelthlise
20) Management of Ocular Injures	Paton & Goldberg
21) Eye & Systemic diseases	Frederick & Mausoi
22) Parson's diseases of the Eye	Miller

23) Ophthalmic Pathology atlas	Hogan
24) Basic Eye Surgery	Galbrath
25) Current Concepts in Ophthalmology	Kekaoman
26) Optics & Refractions	L.P. Agrawal
27) Disease of the Eye	May & Ayrth
28) Principles of Optic & Refraction	Agarwal
29) Clinical Refraction & Visual Science	John levene
30) Ophthalmic of Management	ICEH, Landon
31) Microbiology of Eye	Ted Snie
32) Preventive & Social Medicine	Park (New Edition)
33) Pedratric Optometry	Elen
34) Primary Eye Care	WHO Publication
35) Health Eye Activity Books	ICEH Landon
36) Village Struggle for Eye Care	ICEH Landon
37) Communication Theory	Maquills

Date:- 20-02-2008

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