

SHRI GURU RAM RAI UNIVERSITY DEHRADUN
(UTTARAKHAND)

REGULATIONS OF THE UNIVERSITY FOR THE AWARD OF THE
DEGREE OF BACHELOR OF SCIENCE IN OPTOMETRY

In exercise of the powers conferred by section of the SGRR University Act no.3 of 2017. The Academic Council of the Shri Guru Ram Rai University Dehradun hereby makes the following regulations:-

SHORT TITLE AND COMMENCEMENT

- (1) These regulations shall be called "THE REGULATIONS FOR THE BACHELOR OF SCIENCE IN OPTOMETRY OF THE SHRI GURU RAM RAI UNIVERSITY, DEHRADUN".
- (2) They shall come into force from the 2017-2018 academic sessions.
- (3) The regulations framed are subject to modification from time to time by the sending them to the Academic Board of the University.

ADMISSION, SELECTION, MIGRATION AND TRAINING

ADMISSION TO THE B.Sc, MEDICAL RADIO & IMAGING TECHNOLOGY COURSE.

'ELIGIBILITY CRITERIA'

No Candidate shall be allowed to be admitted to the B.Sc Optometry (MRT)until:-

- 1) He/She has completed the age of 17 years on or before first day of July of the year commencing the prescribed academic session of the said course;
- 2) He/She has passed qualifying examination as under:

a) The Indian school Certificate Examination which is equivalent to 10+2 Higher Secondary Examination after a period of 12 years study, the last two years study comprising of Physics, Chemistry, Biology or Mathematics or any other elective subject with English at a level not less than the core course for English as prescribed by the National Council for Educational Research and training after the introduction of the introduction of the 10+2+3 years educational structure as recommended by the National Committee on education;

OR

b) The Intermediate examination in science of an Indian University/Board or other recognized examining body with Physics, Chemistry, Biology /Maths which shall include a practical test in these subjects and also English as a compulsory subject.

OR

c) The pre-professional or medical examination with Physics, Chemistry and Biology after passing either the higher Secondary school examination, or the pre-university or an equivalent examination. The pre-professional/pre-medical examination shall include a practical test in physics, Chemistry and Biology/and also English as a compulsory subject.

OR

d) The first year of the three years degree course of recognized University, with Physics, Chemistry and Biology/ including a practical test in these subject provided the examination is a 'University Examination' and candidate has passed 10+2 with English at al level not less than a core course;

OR

e) B.Sc examination of an Indian University, provided that he/she has passed the B.Sc examination with not less than two of the following subjects-Physics, Chemistry (Botany, Zoology) and further that he/she has passed the earlier

qualifying examination with the following subjects Physics, Chemistry/Biology and English (10+2 level);

OR

f) Any other examination which in scope and standard is found to be equivalent to the intermediate science examination of an Indian University/Board, taking Physics, Chemistry and Biology including a practical test in each of these subjects and English.

MIGRATION/TRANSFER OF CANDIDATE

- a)** Migration/ Transfer of candidate from one recognized institution to another institution of this University or from another University will not generally be considered.

However, under extra ordinary circumstances, the Vice –Chancellor shall have the power to place any migration/ transfer he deems fit I the Governing Council and get its approval for grant of permission for migration/ transfer to candidates to candidates undergoing course of study in affiliated institutes of this

Bachelor in Optometry (B.Sc. Optometry)

Optometry is health care profession which deals with the examination, diagnosis treatment and management of diseases and disorders of the visual system. It is a vision care science. One can also define it as the science of eye equipment (including lenses and spectacles) which is imbued with the idea of improving the vision of the human eye and remove all kinds of obstacles of sight which an individual may experience. Optometrists work in high street practice or hospital eye clinics, where they prescribe and dispense spectacles and contact lenses, and low vision aids; and increasingly work alongside ophthalmologists to monitor the treatment of ocular disease.

This is dynamic and challenging career, which allows one to help people, achieve personal growth, community respect, job flexibility and financial success and offers virtually unlimited opportunities.

The Program is envisaged to develop a multipurpose ophthalmic manpower at Paramedical level. The training will enable a student to become a competent person in providing service as an Optician, Optometrist, Refractionist, and Ophthalmic Assistant to the community in urban, semi-urban and rural settings in Private, semi-Governmental and Governmental Sectors.

Facilities

- Extensive teaching and laboratories with attractive clinical areas.
- These state –of the- art labs provide excellent hands on training to students.
- Excellent workplace in hospital with input of large number of patients in OPD and IPD

B. Sc. (Optometry)

COURSE STRUCTURE

This course shall be for a period of three academic years and commencing from 1st August. There is no session vacation.

The admission for this course shall be:

1. Candidates who have secured at least 40% of marks or Grade-III in class 12 or equivalent examination in Science. Subjects (Physics, Chemistry, Biology & Mathematics)
2. Admission shall be held in July each year.

Academic Time

Monday to Friday -9:00AM to 4:00 PM

Academic time is devoted to

1. Theory classes
2. Lecture demonstrations
3. Seminars/Group discussion
4. Practical works in OPD (out patient department), various laboratories, clinics, ophthalmic. Investigative labs and community work.

First Year

Thirty-six theory lectures per month (each one hour) and two seminars in a month (each two hours)

Total theory time per month: 10 hrs/week

Practical postings: 26 hrs/week

Total academic time per month: **36 hrs/week**

Second Year

Thirty six theory lectures per month (each one hour) and two seminars in a month (each two hours)

Total theory time per month: 10 hrs/week

Practical postings: 26 hrs/week

Total academic time per month: **36 hrs/week**

Third Year

Eighteen theory lectures per month (each one & half hour) and two seminars in a month (each two hours)

Total theory time per month: 8 hrs/week

Practical Postings: 28 hrs/week.

Training period & time distribution:

1. Total duration of the course will be 4 years including 1 year internship. The students shall undergo a period of certified extending over three years comprising of one year of clinical training (Internship), from the day of commencement of his study of B.Sc optometry. Each academic year shall consist of 180 days, teaching of 8 hours each working day, including one hour of lunch break.

Attendance: 75% attendance (theory and practical individually) is mandatory appear in the sessional examination and the university examinations.

Medium of instructions: English, throughout the course studies

UNIVERSITY EXAMINATIONS:

Theory Papers will be prepared by examiners as prescribed. Nature of question will be short answer type / objective type and marks for each part indicated separately.

Practical/ clinical will be conducted in the laboratories or hospital wards. Objective will be to assess proficiency in skills Conduct of experiment, interpretation of data and logical conclusion. Clinical cases should preferably include common diseases not esoteric syndromes or rare disorders. Emphasis should be on candidate's capability in eliciting physical signs and their interpretation.

Viva/ oral includes evaluation of management approach and handling of emergencies Candidate's skills interpretation of common investigative data also is to be evaluated.

The examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary for knowledge, skills along with clear concepts of the fundamentals, which are necessary for him to carry out his professional day to day work competently. Evaluation will be carried out on an objective basis and practical Question papers should preferably be of short structure/objective type.

Clinical cases/ practical shall take into account common diseases, which the student is likely to come in contact in practice.
During evaluation (both external and internal) it shall be ascertained if the candidate has acquired the skills.-

There shall be one main examination in a year and a supplementary to be held not less than 6 months after publication of its results.

Note: Result of all University Examinations shall be decided before the start of teaching for next session.

GENERAL LECTURES FOR ALL STUDENTS (1ST, 2ND & 3RD YEAR)

1. Hospital environment and role of student.
2. The profession & Ethics.
3. Communication with the patients.
4. Statistics and its importance.
5. Social welfare of eye patients.
6. Law and the Optometry.

THEORY SUBJECT FOR FIRST YEAR

1. PAPER 1ST - HUMAN ANATOMY & PHYSIOLOGY (BSO-101)

1. Introduction of human body, cell and various tissue of the body.
2. Embryology and development.
3. Skeletal system of Human body
4. Muscles of the body
5. Circulatory system
6. The Blood
7. The main arteries and veins of the body & lymphatic system
8. Digestive system
9. The liver
10. The Gall bladder, Pancreas & Spleen
11. Respiratory system
12. Endocrine Organs
13. Excretory System
14. Reproductive system
15. Central Nervous System
16. Brain & Cranial Nerves

17. Spinal Cord and Peripheral nerves
18. Automatic nervous system
19. The Food, Vitamins & Protein

2. PAPER 2ND - OCULAR ANATOMY, PATHOLOGY AND MICROBIOLOGY (BSO-102)

1. OCULAR ANATOMY

2. Embryology of the eye in general
3. Orbit and its immediate relations
4. Lids and eye lid glands
5. Conjunctiva, cornea and sclera
6. Iris and ciliary body
7. Lens and Vitreous
8. Retina & Choroid
9. Ocular Muscles
10. Visual Pathways
11. Sympathetic and Parasympathetic's system
12. Vascular supply of eye
13. Lacrimal apparatus
14. Higher visual centres

2. OCULAR PATHOLOGY

1) HAEMATOLOGY

- 1.1 Blood Cells and blood collection techniques
- 1.2 Haemoglobin estimation
- 1.3 Total leucocyte count
- 1.4 Differential leucocyte count
- 1.5 Erythrocyte sedimentation rate
- 1.6 Peripheral blood film-staining, significance of a peripheral smear
- 1.7 Bleeding time, clotting time

2) CLINICAL PATHOLOGY

- 2.1 Urine Collection methods
- 2.2 Physical Examination of Urine
- 2.3 Chemical Examination of Urine
- 2.4 Microscopic Examination of Urine

3) HISTOPATHOLOGY

- 3.1 Grossing of tissue
- 3.2 Tissue processing

3.3 Section cutting

3.4 Staining-Hematoxylin & Cosin and Special Stains

3. OCULAR MICROBIOLOGY

1. Introduction to Microbiology & classification
2. Gram Positive Bacteria
3. Gram Negative Bacteria
4. Fungi-Sephorophytics and pathogenic
5. Virus
6. Aseptic Techniques
7. Chlayadia & Parasites.

3. PAPER 3RD - OCULAR PHYSIOLOGY & BIOCHEMISTRY

INCLUDING BINOCULAR REFLEXES & ITS

MAINTENANCE (BSO - 103)

OCULAR PHYSIOLOGY

1. General Physiology of the eye – An Introduction
2. Maintenance of Transparency of the Cornea
3. Maintenance of Transparency of the Lens
4. Visual Acuity and form Sense
5. Pupillary reflexes
6. Accommodation
7. Convergence
8. Intra Ocular Pressure
9. Night Vision
10. Colour Vision
11. Visual Fields
12. Extrinsic Muscles, Actions and Ocular Movements
13. Higher Visual Centres and righting reflexes
14. Electrophysiological Aspects
15. Conjugate and disjunct – Movement of the eye.

OCULAR BIOCHEMISTRY

1. Introduction to various biochemical test
2. General Introduction to metabolic processes affecting the eye
3. Rhodopsin Cycle
4. Aqueous and vitreous humours
5. Metabolism of lens and cornea.

4. PAPER 4TH – OPTICS & LENSE GRADING AND FITTING(BSO-104)

1. Elementary basis of light-Interference, diffraction, polarization spectrum, surface tension, viscosity
2. Principles of Refraction.
3. Physical Optics-1, Lens Shapes-Convex, Concave
4. Physical Optics-2, Thin Lens equation, thick lens equation
5. Physical Optics-3, Front and back vertex power
6. Physical Optics-4, Aberrations
7. Physical Optics, Spherical, Cylindrical & Toric surfaces, Aspheric surfaces
8. Prisms-definition, uses nomenclature, apex
9. Determination of focal length & diopteric power of lens
10. Strum's Conoid
11. Neutralization of lenses
12. Focimeter
13. Centre & axis Marking by focimeter
14. Simple & Toric transposition
15. Prismatic effect & Decentration
16. Abberations & Tints in spectacle Lenses
17. Spectacle Lens Manufacturing – Sphericals, Toric, Biofocals, Lenticulture & Lab Visit
18. Spectacle Frames –History, Nomenclature, Types & parts, sides, joints, frame bridge.
19. Shape of Spectacle Frame –Measurements & Making, Frame & Face Measurements
20. Schematic eye
21. Emmetropia & Ammetropia – Aetiology, Population, Distribution, Growth of eye
22. Myopia
23. Hypermetropia
24. Astigmatism
25. Aphakia/Pseudo-Phakia

PRACTICAL

1. Workshop
2. Manufacturing spectacles lenses
3. Manufacturing bifocal lenses
4. Fitting bifocal, Multifocal , Prism Lenses
5. Fitting lenses in frames
6. Final checking adjustment of preparation
7. Patient complaints, handling corrections
8. Neutralization
9. Refraction under the supervision
10. Measurement and making frames and face measurements
11. focimeter

THEORY SUBJECT FOR SECOND YEAR

1. PAPER 1ST - PHARMACY AND PHARMACOLOGY (BSO- 201)

1. Ocular Pharmacology – An Introduction
2. Autonomic nervous system
3. Routes of drug administration
4. Miotics, Mydriatics & Cycloplegics drugs
5. Antibacterial drugs & therapy
6. Antifungal drugs & therapy
7. Anti-Viral drugs & therapy
8. Antibacterial drugs & Therapy
9. Anti-inflammatory drugs & therapy
10. Anti-glaucoma drugs & therapy
11. Ophthalmic dyes
12. Local Anaesthetics
13. Ophthalmic preservatives
14. Ocular lubricants
15. Ocular irrigating solutions
16. Ocular antiseptic & disinfectants
17. Contacts lens solution
18. Chelating agents
19. Immunosuppressive agents
- PRACTICAL**
20. Quality Control:
 - a. Sterilization
 - b. pH measurement
 - c. Osmolarity
 - d. Spectrophotometry for concentration
21. How to prepare following eye drops:
 - a. Pilo-clonidine eye drops
 - b. Artificial eye drops
 - c. Glycerin eye drops
 - d. Homatropine eye drops
 - e. EDTA eye drops
 - f. Sulphacetamide eye drops
 - g. Dexamethasone eye drops
 - h. Methylecellulose eye drops
 - J. Saline eye drops
 - K. Sodium citrate eye drops
22. MK Media Preparation
23. Autologous serum eye drops preparation
24. Dilution of drug in different concentration
25. Steroid detection test

2. PAPER 2ND – REFRACTION (INCLUDING PRESCRIPTION, MAKING & FITTING OF GLASSES) BSO-202

1. Emmetropia & Ammetropia –Aetiology, Population, Distribution, Growth of eye.
 2. Myopia
 3. Hypermetropia
 4. Astigmatism
 5. Aphakia/Pseudo-phakia
 6. Presbiopia
 7. Keratoconus
 8. Post-Op. Refractive errors
 9. Refraction of Irregular reflex
 10. Accommodation & Convergence – 1. Far Point, Near Point, ranges, Amplitude of accommodation
 11. Accommodation & Convergence – 2. Methods of measurements, NPA. AC/A ratio.
 12. Retinoscopy –Principle & Method
 13. Objective Refraction
 14. Subjective Refraction
 15. Cross Cylinder
- PRACTICAL**
16. Manifest squint work-up
 17. Paralytic squint work-up
 18. Pleoptics
 19. Orthoptic Exercise

3. PAPER 3RD INVESTIGATIVE OPHTHALMOLOGY (BSO203)

1. Orthoptics-General Concept
2. Ocular Muscles and movements
3. AC/A ratio
4. Measurements of angle of squint
5. Latent squint
6. Maddox rod
7. Maddox Wing
8. Synoptophore
9. Manifest concomitant
10. Paralytic Squint
11. Head Posture and its significance
12. Hess Screening and its Interpretations
13. Pleoptics
14. Occlusion –types and uses
15. Nystagmus
16. A.V. Syndromes
17. Testing of ARC
18. Amblyopia
19. Disorders of accommodation
20. Paediatric Visual acuity assessment
21. Paediatric Refraction
22. Neural aspects of binocular vision

PRACTICAL

1. Refraction and prescription of glasses in OPD

4. PAPER 4TH OPHTHALMIC INSTRUMENTS AND APPLIANCES (BSO-204)

1. Indirect Ophthalmoscope
2. Direct Ophthalmoscope
3. Slit Lamp: HAAG-Streit
4. Photo-slit lamp
5. Lensometer. Lens gauge
6. Tonometer
7. Fundus Camera
8. External eye Photography
9. Auto-refractometer
10. Corneal Examination -1. Placido disc
11. Corneal Examination -2. Keratometer
12. Corneal Examination -3. V KG
13. Corneal Examination -4. Specular Microscopy
14. Corneal Examination -5. Aesthesiometer
15. Exophthalmometer
16. Perimeter – Manual & Automated
17. Orthoptics Instruments- Haploscope/Home devices
18. Nerve fiber analyzer
19. Frequency doubling perimeter
20. Non Contact Tonometer
21. Heidelberg Analmascope
22. Pachometers
23. Contrast sensitivity tests
24. Glare acuity tests
25. Colour vision tests
26. Dark adaptometer

PRACTICAL

27. Lensometer, Lens gauge
28. Tonometer
29. Placido disc
30. Ketterometer
31. VKG
32. Specular Microscopy
33. Exophthalmometer
34. Perimeter
35. Non Contact Tonometer
36. Slit Lamp: Haag-Streit
37. Photo-slit lamp
38. Fundus Camera
39. Contrast sensitivity tests
40. Glare acuity tests
41. Colour vision tests
42. Dark adaptometer

THEORY SUBJECT FOR THIRD YEAR

1. PAPER 1ST -CLINICAL & ADVANCED OPTICS & ORTHOPTICS (BSO-301)

1. Orthoptic-General concept
2. AC/A ratio.
3. Measurements of angle squint
4. Latent squint
5. Maddox rod
6. Maddox wing
7. Synoptophore
8. Manifest concomitant
9. Squint Concomitant
10. Paralytic Squint
11. Head posture and its significance
12. Hess Screening and its Interpretations
13. Pleoptics
14. Occlusion –types and uses
15. Nystagmus
16. A.V. Syndromes
17. Testing of ARC
18. Amblyopia
19. Disorders of accommodation
20. Paediatric visual acuity assessment
21. Paediatric Refraction
22. Neural aspects of binocular vision

2. PAPER 2ND CLINICAL REFRACTION & CONTACT LENSES (BSO-302)

REFRACTION

1. Emmetropia & Ammetropia –Aetiology, Population. Distribution, Growth of eye.
2. Myopia
3. Hypermetropia
4. Astigmatism
5. Aphakia/Pseudo-Phakia
6. Presbiopia
7. Keratoconus
8. Post-Op. Refractive errors
9. Refraction of irregular re/ex
10. Accommodation & Convergence -1. Far point, near point, range, amplitude of accommodation

11. Retinoscopy –Principle & Methods
12. Objective Refraction
13. Subjective Refraction
14. Cross Cylinder

CONTACT LENS

1. History of Contact Lens
2. Corneal Anatomy and Physiology
3. Corneal Physiology and Contact Lens
4. Preliminary Measurement and Investigations
5. Slit Lamp Biomicroscopy
6. Contact Lens materials
7. Optics of the Contact Lens
8. Glossary of Terms: Contact Lenses
9. Indications and Contra Indications contact Lens
10. Rigid gas permeable contact lens design
11. Soft Contact lens design & manufacture
12. Keratometry, Placido's disc, Tonography
13. Fitting philosophies
14. Fitting of Spherical SCL and Effect of parameter changes
15. Astigmatism correction options
16. Fitting Spherical RGP contact Lenses, Low OK, High OK
17. Effects of RGP contact Lenses parameter changes on lens fitting
18. Fitting in Astigmatism (Sph. RGP)
19. Follow-up post fitting examination
20. Follow-up Slit Lamp examination
21. Fitting in Keratoconus
22. Fitting in Aphakia, Pseudophakia
23. Cosmetic Contact Lenses
24. Fitting Contact Lens in children
25. Toric Contact Lenses
26. Bifocal Contact Lenses
27. Therapeutic Lenses/Bandage lenses
28. Contact lens following ocular surgeries
29. Disposable contact lenses, frequent replacement and Lenses
30. Use of Specular Microscopy and pachymetry in Contact Lenses
31. Care & maintenance of Contact Lenses
32. Contact Lens modifications of finished lenses
33. Instrumentation in Contact lens practice
34. Checking finished lenses parameters
35. Recent developments in Contact Lenses
36. Review of lenses available in India

3. PAPER 3RD COMMUNITY OPHTHALMOLOGY & EYE BANKING (BSO-303)

1. Emmetropia & Ammetropia –Aetiology, Population. Distribution, Growth of eye.
2. Myopia
3. Hypermetropia
4. Astigmatism
5. Aphakia/Pseudo-Phakia
6. Presbiopia
7. Keratoconus
8. Post-Op. Refractive errors
9. Refraction of irregular re/ex
10. Accommodation & Convergence -1. Far point, near point, range, amplitude of accommodation
11. Retinoscopy –Principle & Methods
12. Objective Refraction
13. Subjective Refraction
14. Cross Cylinder
15. Low- Vision aids: Techniques & microscopes
16. Rehabilitation of blinds

EYE BANK

1. Publicity
2. How to donate your eyes
3. Preservation of eyes
4. Pre-operative Instruction
5. Post-operative Instruction
6. Latest techniques for Preservation of donor Cornea

COMMUNITY OPHTHALMOLOGY

1. Concepts of community Ophthalmology-I
2. Concepts of community Ophthalmology-II
3. The Epidemiology of Blindness (General Principles) – I
4. The Epidemiology of Blindness (General Principles) – II
5. The Epidemiology of Blindness (Disease specific strategies) – III
6. The Epidemiology of Blindness (Disease specific strategies) – IV

7. Survey Methodological – I
8. Survey Methodological – II
9. Survey Methodological – III
10. Screening Procedures in Ophthalmology – I
11. Screening Procedures in Ophthalmology - II
12. School eye screening programme
13. Primary eye care
14. Organization of Out reach services
15. Organization of Reach-in-programme
16. Information, Education, communication
17. Rehabilitation of the visually handicapped
18. National programme for control of Blindness-I
19. National programme for control of Blindness-I
20. Vision 2020: The Right to sight

4. PAPER 4TH - INVESTIGATIONS IN CLINICAL OPHTHALMOLOGY & MANAGEMENT OF OT (BSO-304)

1. Principle, Techniques and preparation of the patient
2. ERG
3. Electro-Oculomyo-gram
4. Ultra-sono-graphy
5. Tonography
6. Berman's Locator/Foreign body locator
7. Flurescein Angiography
8. Ocular Photography –anterior segment
9. Dark Adaptometry: Adaptation & Adaptometer
10. Syringing & Lacrimal function Test
11. Gonioscopy
12. Pachometry
13. Perimetry
14. Laser Therapy
15. Contrast Sensitivity
16. Slit Lamp
17. VKG
18. Specular Microscopy
19. Fundus Photography
20. Colour Vision Investigations- Ishhara charts, E-G Lantern, Negal's anomaloscope, 100 Hue Test
21. A –Scan Biometry
22. Heidelberg Retina-tomography HRT-II
23. Nerve Fiber analyzer
24. Frequency doubling perimeter
25. Non Contact Tonometry
26. UBM
27. OCT

MANAGEMENT OF OT

1. Introduction to Ocular in general
2. Asepsis: How to achieve

B.Sc Optometry Phase-I

Course Code	Course Title	Marks for theory			Marks for practical			Total Marks
		IA	EE	Total	IA	EE	Total	
BSO 101	Human Anatomy & Physiology	30	70	100	30	70	100	200
BSO 102	Ocular Anatomy, Pathology & Microbiology	30	70	100	30	70	100	200
BSO 103	Ocular Physiology & Biochemistry Including Binocular Reflexes & its Maintenance	30	70	100	30	70	100	200
BSO 104	Optics & Lens Grinding & Fitting	30	70	100	30	70	100	200
Total		120	280	400	120	280	400	800

B.Sc Optometry Phase-II

Course Code	Course Title	Marks for theory			Marks for practical			Total Marks
		IA	EE	Total	IA	EE	Total	
BSO 201	Pharmacology & Pharmacy	30	70	100	30	70	100	200
BSO 202	Refraction (including prescription, making & fitting of glasses)	30	70	100	30	70	100	200
BSO 203	Investigative Ophthalmology	30	70	100	30	70	100	200
BSO 204	Ophthalmic Instrument & Appliances	30	70	100	30	70	100	200
Total		120	280	400	120	280	400	800

B.Sc Optometry Phase-III

Course Code	Course Title	Marks for theory			Marks for practical			Total Marks
		IA	EE	Total	IA	EE	Total	
BSO 301	Clinical & advanced Optics & Orthoptics	30	70	100	30	70	100	200
BSO 302	Clinical Refraction and Contact lenses	30	70	100	30	70	100	200
BSO 303	Community Ophthalmology and Eye Bank	30	70	100	30	70	100	200
BSO 304	Investigation in Clinical Ophthalmology and management of OT	30	70	100	30	70	100	200
Total		120	280	400	120	280	400	800