

## BACHELOR OF SCIENCE IN OPTOMETRY (B.Sc. (OPT) )

**SYLLABUS** (Detailed Syllabus will be available from the Universities concerned/Directorate of Medical Education, Thiruvananthapuram by paying an amount of Rs.50/-).

### FIRST YEAR

First Semester (6 months)

<u>Subjects</u>	<u>Type of Examination</u>
1. English	Internal Assessment
2. Malayalam	”
3. Physics	”
4. Chemistry	”
5. Mathematics	Internal Assessment only
6. Anatomy	Internal Assessment
7. Physiology	”

### Second Semester

<u>Subjects</u>	<u>Type of Examination</u>
1. English	University exam
2. Malayalam	”
3. Physics	”
4. Chemistry	”
5. Anatomy	”
6. Physiology	”
7. Accountancy	Internal Assessment only

### SECOND YEAR

**Third semester**

<u>Subjects</u>	<u>Type of Examination</u>
1. Information Technology	Internal Assessment Only
2. Nutrition & Biochemistry	Internal Assessment
3. Microbiology	”
4. Pathology	”
5. Optometric Optics	”
6. Clinical Examination of Visual System & Instruments	”
7. Visual Optics	”
CLINICS – 18 hours/week	

### Fourth Semester

<u>Subjects</u>	<u>Type of Examination</u>
1. Optometric Optics	University Examination
2. Clinical Examination of Visual Systems & Instruments	”
3. Visual Optics	”
4. Nutrition Biochemistry	”
5. Microbiology	”
6. Pathology	”
CLINICS – 18 hours/week	

### THIRD YEAR

### **Fifth Semester**

<u>Subjects</u>	<u>Type of Examination</u>
1. Pharmacology	Internal Assessment
2. Systemic Diseases Medicine	”
3. Eye Diseases	”
4. Dispensing Optics & Mechanical Optics Contact Lens & Low Vision aid	”
5. Binocular Vision & Squint	”
6. Community Ophthalmology	”
CLINICS & PROJECTS – 20 hours/week	

### **Sixth Semester**

<u>Subjects</u>	<u>Type of Examination</u>
1. Eye Diseases & Systemic Diseases	University exam
2. Dispensing Optic, Mechanical Optics Contact Lens & Low vision aids	”
3. Binocular Vision & Squint	”
4. Community Ophthalmology	”
5. Project	”
6. Pahrmacology	”

CLINICS & PROJECT 20 hours/week

### **FOURTH YEAR**

#### **INTERNSHIP**

One month each in the following specialities in the

#### **Seventh semester**

1. Ophthalmic Theatre Techniques
2. Refraction and Contact lenses
3. Mechanical Optics
4. Paediatric Ophthalmology & Orthoptics
5. Community Ophthalmology
6. Ophthalmic Instrumentation Photography (Advanced & Basic)

#### **Eighth semester**

Six months special training in one of the above branches of preference based on merit.

#### **REQUIREMENT OF ATTENDANCE**

A candidate will be permitted to appear for University Examination in any subject only if he/she secured not less than 80% attendance which is also required at the postings to clinics.

#### **SCHEME OF STUDY**

In addition to practical training in the Department of Optometry, the students will be posted to the departments of Anatomy, Physiology, Physics, Microbiology and Optical workshop attached to Ophthalmic clinics. Besides practical classes, the training in Optical work should be given in clinics, with the candidate taking active part in the routine work of the out-patient department.

Internal assessment will be conducted at the end of each posting and the marks will be handed over to the Course Director for B.Sc. (OPT) for inclusion in the final assessment of the candidate.

#### **VACATION /HOLIDAYS**

The students will be permitted to avail holidays and vacations as scheduled below :

Onam Holidays	- 7 days
Christmas Holidays	- 7 days
May vacation	- 1 month

## SESSIONAL MARKS

Sessional marks will be awarded to the candidates in each subjects of study as detailed in the scheme of examination. The award shall be on the basis of the assessment made by the teachers from the candidate's performance in the assignments, class tests, Optical shop work, record work etc. The marks secured by the candidates during each year shall be forwarded to the University at the end of the year, before the commencement of the written examination.

## SCHEME OF EXAMINATION

There shall be University Examinations the end of all 3 years as scheduled below.

### FIRST YEAR EXAMINATION

A candidate shall be declared to have passed the first year examination, if he/she secures the minimum marks specified below in the following subjects :

#### First Semester

	Internal Assessment only	
1. English	20	
2. Malayalam	20	
3. Physics	20	
4. Chemistry	20	
5. Anatomy	20	
6. Physiology	20	
7. Mathematics	40	
Total	160	

### Second Semester (UNIVERSITY EXAMINATION)

Sl. No.	Subjects	Internal	Max: Marks	Min. Marks	Duration	(Hours)
			Assessment of 1 <sup>st</sup> Semester			
1.	English	20	80	50	2	
2.	Malayalam	20	80	50	2	2
3.	Physics	20	80	50	2	2
4.	Chemistry	20	80	50	2	2
5.	Accountancy	40	-	50	2	2
6.	Anatomy	20	80	50	2	2
7.	Physiology	20	80	50	2	2
Total		160	480	300		

### SECOND YEAR EXAMINATION

A candidate shall have declared to have passed the second year examination, if he/she secures the minimum marks specified below in the following subjects :

#### **Third semester**

Internal  
Assessment only

1. Information Technology	40
2. Nutrition & Biochemistry	20
3. Microbiology	20
4. Pathology	20
5. Optometric Optics	20
6. Clinical Examination of Visual System & Instruments	20
7. Visual Optics	20

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Total 160

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#### Fourth Semester

Sl. No.	Subjects	Internal	Max Assessment of 3 <sup>rd</sup> semester	Min Marks	Duration	Mark	(Hours)
1.	Optometric Optics *						
2.	Clinical Examination of Visual Systems & Instruments *						
3.	Visual Optics *						
4.	Nutrition Biochemistry	20	80		50		2
5.	Microbiology		20	80		50	2
6.	Pathology		20	80		50	2
Total							

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#### THIRD YEAR EXAMINATION

A candidate shall be declared to have passed the third year examination if he/she secures the minimum marks specified below in the following subjects :

#### Fifth semester

Internal  
Assessment only

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1. Pharmacology	20
2. Systemic Diseases Medicine *	
3. Eye Diseases *	
4. Dispensing Optics & Mechanical Optics Contact Lens & Low Vision aid *	
5. Binocular Vision & Squint *	
6. Community Ophthalmology *	

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Total

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#### Sixth semester

Sl. No.	Subjects	Internal	Max Assessment	Min Marks	Duration	Mark	(Hours)
1.	Eye Diseases and Systemic Diseases *						
2.	Dispensing Optics & Mechanical Optics Contact Lens & Low Vision aid *						
3.	Binocular Vision & Squint *						

4. Community Ophthalmology *					
5. Project *					
6. Pharmacology	20	80	50		2

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**UNIVERSITY EXAMINATION – 2<sup>nd</sup> YEAR**

			Max: Marks	Mini: Marks	Duration
1. *Optometric optics		100			Sessionals
	50	75		3 hrs	
Practical + Viva			100		
Sessional			50	75	4 hrs
			-----	-----	
			300	150	
			-----	-----	
2. *Clinical Examination of Visual System & Instruments		100			
Sessional			50	75	3 hrs
Practical + Viva			100		
Sessional			50	75	4 hrs
			-----	-----	
			300	150	
			-----	-----	
3. *Visual Optics			100		
Sessional			50	75	3 hrs
Practical + Viva			100		
Sessional			50	75	4 hrs
			-----	-----	
			300	150	
			-----	-----	
			900	450	
			=====	=====	

**UNIVERSITY EXAMINATION – 3<sup>rd</sup> YEAR**

			Max: Marks	Mini: Marks	Duration
1. *Eye diseases + Systemic disease		100			Sessionals
	50	75		3 hrs	
Practical + Viva			100		
Sessional			50	75	4 hrs
			-----	-----	
			300	150	
			-----	-----	
2. *Dispensing optics, Mechanical optics contact lens, low visual aids		100			
Sessional			50	75	3 hrs
Practical + Viva			100		
Sessional			50	75	4 hrs
			-----	-----	
			300	150	
			-----	-----	
3. *Binocular vision + Squint		100			
Sessional			50	75	3 hrs

	Practical + Viva	100		
	Sessional	50	75	4 hrs
		-----	-----	
		300	150	
		-----	-----	
4.	*Community Ophthalmology	100		
	Sessional	50	75	3 hrs
	Practical + Viva	100		
	Sessional	50	75	4 hrs
		-----	-----	
		300	150	
		-----	-----	
5.	*Project	100	50	
		-----	-----	
		1300	650	
		=====	=====	

### **SUPPLEMENTARY EXAMINATION**

Supplementary examination will be held every 6 months after the regular examinations. Those failing in any one of the subjects need reappear only in that subject.

There will be 2 supplementary batches of 6 months duration. One supplementary batch will be conducted after the first year for those failed or not appearing due to lack of attendance in the first year subject/subjects. Second supplementary batch will be conducted after third year for those failed in the second and third year subject/subjects. Students should secure not less than 80% attendance of the supplementary classes (Theory & practicals) held for them in the failed subject/subjects before appearing the University examination.

Those failed in the 3 year subject/subjects will have to reappear for a minimum 2 months postings in each of the failed subject, before appearing for the University examination in that subject/subjects.

### **EXAMINERS**

There shall be two examiners – one internal and external. The external examiners shall be drawn from a sister University in Kerala or outside Kerala where a similar course is being conducted. Both external and internal examiners should preferably be those who are full time teachers of Ophthalmic Institution or Ophthalmic Technical Institution.

The external examiners will have to hand over the original mark-lists to the Chairman (Course Director for B.Sc. OPT) and the duplicate mark-lists to the Controller of University Examinations.