



Dow University  
of Health Sciences

PROSPECTUS

ADMISSION  
IN

Session  
2020-21



**BS OPTOMETRY**

**Department of  
Ophthalmology  
& Visual Sciences**

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## MESSAGE BY CHAIRPERSON

**Dr. Muhammad Muneer Quraishy**

Professor & Chairperson

Department of Ophthalmology & Visual Sciences

Dow University of Health Sciences

Dow University of Health Sciences is the only Public University in Sindh to offer the course of BS in Optometry. The Department of Ophthalmology and Visual Sciences is pleased to start this course in January 2020.

This course will be mainly based in the Dow International Medical College. However students will spend some time at the Dow Medical College. The Department of Ophthalmology and Visual Sciences has an excellent clinical faculty and this is going to be expanded with the addition of staff qualified in Optometry.

Students of Optometry will be taught medical sciences and optics relevant to the field of Optometry. They will have exposure to a large number of clinical cases.

After completing the course they will have enough knowledge and expertise to become primary care providers to people with visual complaints. They will have employment opportunities in public and private sector institutes as well as eye clinics and optical outlets.

## **Vision Statement DUHS**

*To be a pre-eminent academic institution  
committed to changing and saving lives.*

## **Mission Statement DUHS**

*Providing outstanding patient centered education,  
training and clinical care informed by  
cutting edge research and innovation generating and  
disseminating new knowledge*

# **BS Optometry**

Millions of people all over the world suffer from visual impairment and blindness. Uncorrected refractive error is the leading cause of visual impairment globally.

In order to meet this challenge there is a need to develop human resources including optometrists to provide sustainable service delivery.

Optometry functions in a primary capacity. Optometrists do sight testing and give corrective prescriptions including spectacles. They examine the eyes and if there is any disorder make referrals to the Ophthalmologist for further care. They along with the Ophthalmologist have an important role in the prevention and treatment of blindness.

BS Optometry is a four year program covering all the theoretical and clinical aspects of training required by an Optometrist to achieve a successful career. Dow University of Health Sciences is the only public sector university in the Sindh province to offer this course.

## **INTRODUCTION**

According to World Health Organization (WHO) estimates, two hundred and eighty five (285) million people suffer from moderate to severe vision loss with 39 million considered blind. Of these, 123 million (43%) have uncorrected distance refractive errors. In addition, there are 517 million people with near vision impairment due to uncorrected presbyopia. Uncorrected refractive error is the leading cause of visual impairment globally which places a financial burden on the economy and is a significant contributing factor to poverty and is avoidable.

Refractive errors account for the third most prevalent cause of blindness in Pakistan. Refractive errors accounts for 11.4% ( 0.23 million) of the blind. Visually impaired people are ten times more.

The increasing number of cases of avoidable blindness and visual impairment pose a significant challenge. Insufficient healthcare professionals, uneven distribution of resources, the inability to afford treatment and accumulation of affected population in unreachable areas adds to the magnitude of the problem. In order to meet the aims of the Global Action Plan, there must be a focus on the development of human resources, including optometrists, and models of sustainable service delivery.

Optometry addresses these challenges by providing a range of diagnostic, technical and direct patient care and support services required by patients and Ophthalmologists. Optometry functions in a primary care capacity in many developed countries and in developing countries at a secondary level as part of a multidisciplinary team including ophthalmologists.

BS Optometry is the University's qualification for training in Optometry. Optometry is a profession dealing with eye care. Optometrists are trained to examine the eyes and detect problems in eyesight and ocular abnormalities. Optometrists provide primary vision care. They do sight testing and give corrective prescriptions. They examine the eyes and make referrals if needed to Ophthalmologists.

The 4 year program will cover all the theoretical and clinical training required by an optometrist to achieve a successful career. There will be 8 semesters in all during the program.

Optometrists are essential primary eye care providers and along with Ophthalmologists have an important role in the prevention and treatment of blindness. Dow University of Health Sciences is the only public sector university in the province offering this course.

After successful completion of the course, the Degree of BS in Optometry will be awarded by the University. The successful candidate would be eligible to write his specialty as BS Optometry.

## **AIMS AND OBJECTIVES OF THE PROGRAM**

At the end of the 4 year program the student should be able to:

1. Help increase the coverage of eye care in the country and play an important role in the prevention and treatment of blindness.
2. Perform sight testing at community level and primary as well as secondary and tertiary centers
3. Prescribe refractive corrections including spectacles, contact lenses and low vision aids
4. Perform binocular single vision tests and help in the management of strabismus and ocular motility disorders
5. Screen for blinding disorders such as cataract, glaucoma, diabetic retinopathy, age related macular degeneration and refer to ophthalmologist for treatment
6. To be able to operate various diagnostic equipment used in diagnosis and monitoring of eye disease.

## **BASIC SCHEME OF THE PROGRAM**

Total numbers of credit hours	134
Duration	4 years
Semester duration	16-18 weeks
Semesters	Eight
Course load per semester	14-18 Credit hours
Number of courses per semester	5-6

## **STANDARDIZED FORMAT FOR BS (4-YEARS) IN OPTOMETRY**

### **A. BASIC STRUCTURE**

Sr	Categories		No of courses	Credit Hours
1	Basic courses	<ul style="list-style-type: none"><li>English</li><li>Pakistan Studies</li><li>Islamiat</li><li>Ethics</li></ul>	4	07
2	General courses	General Anatomy Physiology( general) Biochemistry( General) Pathology( general)	4	22
3	Discipline specific courses	Ocular Anatomy Ocular Physiology Geometrical optics. Physical optics Physiological optics	13	34
4	Major courses (including Research Project/Internship)	Dispensing optics Refraction Orthoptics Ophthalmic instruments Contact lenses	13	60
5	Electives	<ul style="list-style-type: none"><li>Higher Order Aberrations, Accommodation &amp; Refractive Error Development</li><li>Myopia &amp; Hypermetropia: Etiology and Potential Treatments.</li><li>Visual Field Techniques and Applications for Glaucoma</li><li>Clinical Decision Making in Low Vision</li><li>Laser Applications in Ophthalmology</li><li>Introduction to Sports Vision – Theory and Assessment</li></ul>	4	11
<b>Total</b>				134

## B. DETAILED COURSES STRUCTURE

YEAR 1

SEMESTER I

DURATION 16 WEEK

S.No	Course Code	Course	Hours Per Week	Mode Of Teaching		Credits
				Theory	Practical	
1	ANA-301	Anatomy (General)	8	2	6	4(2+2)
2	ANA-302	Anatomy (Ocular)	8	4	4	4(2+2)
3	PHY-303	Physiology (General)	8	2	6	4(2+2)
4	ENG-309	English	2	2	0	2(2+0)
5	ISL-407	Islamiat	2	2	0	2(2+0)
6	SOC-411	Sociology	1	1	0	1(1+0)
<b>Total Credit Hours</b>						<b>17</b>

YEAR 1

SEMESTER II

DURATION 16 WEEK

S.No	Course Code	Course	Hours Per Week	Mode Of Teaching		Credits
				Theory	Practical	
1	PHY-304	Physiology (Ocular)	8	2	6	4(2+2)
2	BIOCHEM-305	Biochemistry (General)	8	2	6	4(2+2)
3	OPT-307	Geometrical Optics	8	2	6	4(2+2)
4	PAK-310	Pakistan Studies	2	2	0	2(2+0)
5	COMP-409	Intro to Computer	8	2	6	4(2+2)
<b>Total Credit Hours</b>						<b>18</b>



YEAR 2

SEMESTER III

DURATION 16 WEEK

S.No	Course Code	Course	Hours Per Week	Mode Of Teaching		Credits
				Theory	Practical	
1	PATHO-401	Pathology (General & Ocular)	8	2	6	4(2+2)
2	BIOCHEM-306	Biochemistry (Ocular)	8	8	6	4(2+2)
3	PHARMA-403	Pharmacology (General & Ocular)	8	2	6	4(2+2)
4	OPT-405	Visual Optics	3	3	0	3(2+0)
5	OPT-308	Physical Optics	2	2	0	2(2+0))
<b>Total Credit Hours</b>						<b>17</b>

YEAR 2

SEMESTER IV

DURATION 16 WEEK

S.No	Course Code	Course	Hours Per Week	Mode Of Teaching		Credits
				Theory	Practical	
1	OPT-402	Ocular Disease I (Anterior Segment Disease )	8	2	6	4(2+2)
2	OPT-404	Ophthalmic & Optical Instrumentation	8	2	6	4(2+2)
3	OPT-406	Clinical Refraction I	8	2	6	4(2+2)
4	OPT-408	Dispensing Optics	8	2	6	4(2+2)
5	ELEC-410	ELECTIVES 1	2	2	0	2(2+0)
<b>Total Credit Hours</b>						<b>18</b>

YEAR 3

SEMESTER V

DURATION 16 WEEK

S.No	Course Code	Course	Hours Per Week	Mode Of Teaching		Credits
				Theory	Practical	
1	OPT-501	Ocular Disease Ii (Posterior & Neuro-eye Disease )	8	2	6	4(2+2)
2	OPT-503	Contact Lens I	8	2	6	4(2+2)
3	OPT-505	Clinical Refraction I	8	2	6	4(2+2)
4	OPT-507	Binocular Vision & Ocular Motility	2	2	0	2(2+0)
5	OPT-509	Low Vision Aids & Visual Rehabilitation	8	2	6	4(2+2)
<b>Total Credit Hours</b>						<b>18</b>

YEAR 3

SEMESTER VI

DURATION 16 WEEK

S.No	Course Code	Course	Hours Per Week	Mode Of Teaching		Credits
				Theory	Practical	
1	OPT-502	Systemic Condition & The Eye	5	2	3	3(2+1)
2	OPT-504	Contact Lens II	6	0	6	2(0+2)
3	OPT-506	Clinical Refraction II	6	0	6	2(0+2)
4	OPT-508	Dispensing Optics	6	0	6	2(0+2)
5	OPT-510	Community Ophthalmology	6	0	6	2(0+2)
6	OPT-512	Basic Orthoptics	6	0	6	2(0+2)
7	OPT-514	Electives 2	3	3	0	3(3+0)
8	BIOSTAT-312	Biostatistics + Research Methodology	2	2	0	2(2+0)
<b>Total Credit Hours</b>						<b>18</b>

YEAR 4

SEMESTER VII

DURATION 16 WEEK

S.No	Course Code	Course	Hours Per Week	Mode Of Teaching		Credits
				Theory	Practical	
1	OPT-601	Specialized Clinics I	6	0	6	2(0+2)
2	OPT-603	Contact Lens III	6	0	6	2(0+2)
3	OPT-605	Clinical Refraction III	6	0	6	2(0+2)
4	OPT-607	Dispensing Optics III	6	0	6	2(0+2)
5	OPT-609	Optical Shop And Industry Management	3	0	6	3(3+0)
6	OPT-611	Elective 3	3	3	0	3(3+0)
<b>Total Credit Hours</b>						<b>14</b>

YEAR 4

SEMESTER VIII

DURATION 16 WEEK

S.No	Course Code	Course	Hours Per Week	Mode Of Teaching		Credits
				Theory	Practical	
1	OPT-602	Specialized Clinics II	6	0	6	2(0+2)
2	OPT-604	Project Research	18	0	18	6(0+6)
3	OPT-606	Internship	9	0	09	3(0+3)
4	OPT-608	Elective 4	3	3	0	3(3+0)
<b>Total Credit Hours</b>						<b>14</b>

## **Annexure I**

### **Eligibility Criteria**

- HSC (Intermediate Science) Pre-Medical/A Level or Equivalent
- Min. 60% marks or equivalent
- Candidate's Domicile (All Districts of Sindh).

### **Number of Seats: 30**