OCULUS
Optometry CUrriculum for Lifelong Learning through ErasmUS

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CHITKARA UNIVERSITY

Chitkara School of Health Science

Optometry

Self-Assessment

Narrative Description of Changes made to Close Gaps Identified in Preliminary Benchmark

Introduction

Chitkara School of Health Science received the opportunity of the preliminary ECOO benchmark report to make changes in the curriculum and to close all the gaps identified by ECOO. The inception of Chitkara School of Health Sciences took place in the year 2011. Optometry was one of the many departments that opened under the School in the year 2012. Till now 156 students have graduated and currently there are 133 students in the department. Students pay a 3 year fee of a total of 2lakh 36 thousand INR with the fourth year no payment and a modest stipend being given to the students. The Department has hospital collaborations with Sankara Eye Hospital, Ludhiana, Bangalore, Gujrat and Jaipur and Lotus Optometry College, Mumbai, Maharashtra.

The Structure of Optometry and Optometric Education in India with Specific Reference to Chitkara University

In India, In 2012 programmes for optometry were established in Chitkara University. The Graduation and higher education structure in University. As a Chitkara School of Health Sciences degrees at Bachelor level and Masters Course in Optometry was introduced 7 years ago and Ph.D introduced in year 2014. The academic year begins in July. The course is of four years duration. Chitkara University, the best university in Punjab is a government-recognized university with the right to confer degrees as per the Sections 2(f) and 22(1) of the UGC Act, 1956.

Graduates have to undertake a written and practical examination. There does not appear to be any 'formal' timing/structure to this pre-registration process. CU students have an about 80-85% pass rate in every year examination, which can be taken at any point after graduating with a BSc Optometry.

According to the definition of World Council of Optometry (WCO), an organization which represents over 250,000 optometrists worldwide, "Optometry is a healthcare profession that is autonomous, educated, and regulated (licensed/registered), and optometrists are the primary healthcare practitioners of the eye and visual system who provide comprehensive eye and vision care, which includes refraction and dispensing, detection/diagnosis and management of disease in the eye, and the rehabilitation of conditions of the visual system".

Refractive error services provide a practical entry point into the eye health system for those needing correction. With 88.2% of blindness avoidable in India, it is important to provide a comprehensive ocular health examination alongside the refractive error services.

Fully qualified optometrists with a minimum of four years of training are qualified to: Prescribe the latest advances in spectacle lenses including progressive, aspheric, and safety/protective spectacles based on the visual needs of the patient, prescribe rigid and soft contact lenses including orthokeratology,

frequent replacement, and extended wear contact lenses, conduct complex contact lens fitting for paediatric eye conditions, keratoconus, postsurgical complications, eye trauma, and corneal ectasia, prescribe vision therapy, vision training or orthoptic treatment for children with learning problems or common binocular vision disorders, including strabismus and ambylopia, provide low vision and rehabilitative services-vision aids assisting visually impaired people to use their functional vision more effectively, detector diagnose ocular conditions and associated systemic health conditions, and refer them to appropriate health care professionals, and offer counselling services on preventive vision care.

The services offered by an optometrist vary from country to country. The scope of practice of optometry in India is still poorly defined. The public do not have a clear understanding of the role and responsibility of optometrists in the healthcare system. There are multiple cadres of optometrists providing eye care services with varying levels of skill and training.

Comprehensive vision care comprises evaluation, assessment, management, and coordination of a wide range of health care needs with appropriate referral to ophthalmologists or general practitioners when required. In addition to early detection and preventative care, optometrists educate patients regarding the status of their vision and eye health, advise when to seek assistance to ensure early intervention, promote lifestyle choices to ensure good vision and health, provide information regarding visual ergonomics, identify environmental hazards to the eyes and vision, and educate the community to prevent problems and maintain ocular health.

Ongoing communication and common referral systems between optometrists, ophthalmologists, and other medical and rehabilitation professionals provide improved patient management and benefit public wellbeing. Four-year trained optometrists are able to take an active role in the co-management of vision and eye care problems of their patients along with general practitioners and other health professionals. At present, co-managed care between ophthalmologists and optometrists is relatively uncommon in India. With more four-year trained optometrists and the regulation of practice and education, it is expected that highly trained optometrists will play a vital role in inter-professional communication.

Indian two-year diploma optometrists are trained in refraction, and some also have training in contact lenses, ocular disease detection, diagnosis as well as binocular vision and low vision. Eye care personnel with fewer than four years training are less expensive to train; however, they lack the theoretical underpinning, critical thinking skills and ability to contribute to clinical decision-making and vision research. Ophthalmologists require much more expensive training to be able to provide these services.

Four-year trained optometrists offer a reasonable human resource approach as they acquire sufficient basic training and experience to provide comprehensive

vision care. Four-year trained optometrists are able to perform comprehensive examination of both the internal and external structures of the eye, carry out subjective and objective tests to evaluate patients' vision, analyse the test findings, and establish a diagnosis and initiate appropriate management. It is thus more efficient to use four-year trained optometrists, freeing up ophthalmologists for surgery and for treatment of complex cases.

It is not cost effective for the eye health system to provide refractive and ocular disease detection only in tertiary eye health services. Regulated and standardized 4 year trained optometrists can make a major contribution to eye care in a more convenient and cost effective way at a community level.

Optometry in India is making progress toward regulation. The Optometry Council of India, which is due to commence in late 2012, will serve as a peer reviewed independent statutory body to promote high standards of professional practice and conduct and assure quality control in education and in the practice of optometry. The council will deal with complaints against registered optometrists regarding matters of professional misconduct, and implement disciplinary action against those who do not adhere to the code of practice. Therefore, the scope of practice needs to be clearly defined.

Entry requirements for the student seeking admission in B.optometry should have minimum 60% marks in 12th grade or equivalent exam with Chemistry and Physics as compulsory subjects. The admission is based purely on merit. During admission process, the University follows reservation policy as decided by the State.

Departmental Structure

Faculty

There are 13 full time Optometry faculties, 3 PhD and 10 Master in Optometry, 1 Bachelor in Optometry.

Facilities

The College has an Optometry clinic/lab, which is open to the public. Clinical services include: general intake (refraction and binocular vision), contact lenses and visual therapy/training. External clinics include screening programmes for children, low vision clinic at the Sankra Eye Hospital. Where each student attends for four hours duration eight times during their 3 and 4 year as an observer.

The lab has the Aperture ruler, Chair unit, I – Test, Keratometer, Log MAR Chart, Low vision kit, Lensometer, Slit lamp, Snellen chart, Trial lens set, Grand Seiko auto refractometer, Topcon slitlamp SLD2 with imaging system, Binocular vision equipments –BERNELL, Volk 20 D, Keeler indirect ophthalmoscope, Welch allyn combo ophthalmoscope and retinoscope, Keeler indirect opthalmoscope with video imaging system, Digital vision acuity chart, Applanation tonometer (AT),

Dispensing kit, Vision Drum, Tranaglyph (bought with OCULUS funds). The students have a requirement to do a minimum number of patients with these instruments. This is an excellent teaching instrument. When a patient presents with pathology the faculty of optometry can show the fundus to all the students and not just the student examining the patient.

Syllabus and module Specification

General Optometry Clinic

Students are posted in General Optometry clinic from Second year onwards, Second year students Observe the patient and third year students perform Routine Optometry evaluation on community patients under Optometrist supervision

Changes made to close the gaps:

1. Students will be working Minimum 10 case under supervision
2. Students will be evaluated by Optometrist using Rubrics

Contact Lens Clinic

Students are posted in third year, where they are practicing on each other; whereas final year's students (interns) they are fitting on patients.

A change made to close the gaps was making a final station based competency

1. Students will be working Minimum 10 case under supervision (in third year)
2. Students will be evaluated by Optometrist using Rubrics
3. Final year students will be fitting on patients under supervision of Senior Optometrist.

Binocular Vision and Visual Training

Students are posted in third year, where they are practicing on each other; whereas final year's students (interns) they are evaluating patients and giving therapy.

A change made to close the gaps was making a final station based competency

1. Students will be working Minimum 10 case under supervision (in third year)
2. Students will be evaluated by Optometrist using Rubrics
3. Final year students will be practicing on patients under supervision of Senior Optometrist.

Dispensing Clinic

Second year and third year students will be posted in Optical outlets

A change made to close the gaps was making a final station based competency

1. Students will be observing in second year
2. Students will be fitting spectacles on each other in Third year under supervision of Optometrist
3. Students will be evaluated by Optometrist using Rubrics
4. Final year students will be practicing on patients under supervision of Senior Optometrist, they will be evaluated with the help of Rubrics.

Low Vision

Third year students observe Low vision Patients and they have to do 5 cases in 3rd year under supervision of Optometrist.

A change made to close the gaps was making a final station based competency

1. Students will be observing in third year
2. Students will be evaluating Low vision Patient in third year
3. Students will be evaluated by Optometrist using Rubrics

Assessment

All labs now have OSCE exams so that every clinical competency is tested. Students may not pass labs until they show proficiency is all clinical competencies.

Portfolio

Final year students (Interns) need to submit detail description of cases done in Internship (evaluated by senior Optometrist)

Clinical Cases:

The students are required to submit 20 cases throughout their studies according to ECOO format.

The Self-Assessment Document – A new self-assessment document generated via OSAT has been provided

Benchmarking Opinion against the Knowledge Base and Competencies of the European Diploma in Optometry for Chitkara University

This opinion is based on the Panel's analysis of the documents supplied and on discussions at the Chitkara School of Health Science.

Colour Coding

Knowledge Base	**Knowledge base** for European Diploma competencies
Clinical/Practical competencies	**Clinical/practical** European Diploma competencies
	Benchmarking Opinion **Satisfactory**
	Benchmarking Opinion **Some weaknesses**
	Benchmarking Opinion **Inadequate**

Self-Assessment Document Competency Areas	Provisional Opinion	Present Status	ECOO Comments	Method of Gap closure (workshop, patient expansion, other)
Optical Appliances		***Changed to Green***	Criteria, who assesses?	Faculty and senior optometrist will assess based on Rubrics Practical examination in clinical skills
Occupational Optics		***Changed to Green***	Written exam for Practical skill.	Practical examination and viva We will take students for factory visit and vision screening in various factory
Visual Perception			Missing Psychophysics	Will add in Ocular Physiology
Vision and Ageing		***Changed to Green***	Development only 1 hr?	Increased number of hours in syllabus
Refraction		***Changed to Green***	Not much on anamnesis (History & Symptoms)	Rubrics is use for teaching and evaluation
Low Vision			No "Steady Eye No practical SA doc More information needed	Eccentric viewing training is added in Low vision Low vision Rubrics is use for teaching and assessment
Contact Lenses			Ortho K Not on p22 of programme spec as stated in Self Assessment Assessment Criteria? Who assesses?	Ortho-K introduced for B. Optom. Faculty will assess on the basis of Rubrics
Investigative Techniques		***Changed to Green***	Reinoscopy? Only confrontation fields? Indirect ophthalmoscopy?	Rubrics is installed for Retinoscopy, Visual field analyzer practical for 3rd year student

Paediatric Optometry		***Changed to Green***	Cycloplegic refraction not mentioned in HSL 5302 p24 Prog spec	Cycloplegic refraction Added in syllabus
Refractive Surgery			In Advances in Optometry Semester 6?	Investigative procedure are added in 4 sem
Refraction		***Changed to Green***	Assessment criteria? Written Exam for skill? Patient numbers, all 10?	Rubrics is use for teaching and assessment
Ocular Motility		***Changed to Green***	Criteria, who assesses? Written exam for practical skill.	Rubrics is use for teaching and assessment
Investigative Techniques		***Changed to Green***	Indirect ophthalmoscopy, visual fields, diag. drugs? Criteria, who assesses?	Will be assess by faculty with the help of rubrics
Paediatric		***Changed to Green***	Criteria, who assesses? Cycloplegic experience?	Cycloplegic is practically added in 3rd year and assessment via rubrics
Investigative Techniques Optometry		***Changed to Green***	Indirect ophthalmoscopy Visual fields, Diagnostic drugs	Diagnostic drugs in 2nd year and Indireact and Visual field in 3rd year
Neuroscience			Seems to cover basic physiology rather than neuroscience	Will discuss in board of studies meeting
Pathology and General Medical disorders			3203 is mostly ocular pathology. Systemic disease in 5301	Will discuss in board of studies meeting
Ocular Pharmacology		***Changed to Green***	Not clear that it covers clinical diagnostic drugs	Number of hours in Ocular pharmacology are increase
Abnormal			5303 and 5310 have	Detail is added in

Ocular Conditions			minimal detail in syllabi.	Ocular disease part I and II
Investigative Techniques		***Changed to Green***	Fields confrontation only	VFA is added in 2rd year and students will evaluate in 3rd year
Refractive Surgery			Do students see any post-refractive surgery patients?	yes
Abnormal Ocular Conditions		***Changed to Green***	Who assesses in clinics? What Criteria? Any patient experience?	Documentation in log book and evaluation on the basis of Rubrics

Course Coordinator and Course

Sr No.	Name of Course coordinator	Course	Qualification status
1.	Ms. Indu	General anatomy	Masters
2.	Dr. Kiranjeet Kaur	General Physiology	Ph. D
3.	Ms. Pallavi Aggarwal	General Biochemistry	Maters
		Ocular Biochemistry	
		Nutrition	
4.	Mr. Ravinder Singh	Fundamental of computer applications	Masters
	Ms. Alpana	Communication and Soft Skills I	Masters
6.	Ms. Rajveer Kaur	Environmental science	Masters
7.	Dr. Anita Gupta	Physical Optics	Ph.D
		Geometric Optics	
8.	Ms. Renu Thakur	Ocular Physiology	Masters
		Ocular Diseases I & II	
		Visual Optics I & II	
		Clinical Examination of Visual system	
		Pathology	
		Optometric Optics II	
		Basic & Ocular Pharmacology	
9	Mr. Nooruz	Ocular Anatomy	Masters
		Optometric Instruments	
		Contact Lens I	
		Contact Lens II	
		Dispensing Optometry	
		Optometric Optics	
		Physical Optics	
10.	Mr. Yaveesh	Basic Accountancy Workshop	Masters
		Disaster Management	
		Human Rights & human values	
11.	Ms. Ritu	Ocular Microbiology	Masters
12.	Dr. Navita	Optometric Research Methodology	Ph. D
13	Ms. Kritika	Systemic Disease	Masters

4th Year Students (Internship) 15 July 2019 to 15 Feb 2020

Name	Refraction	contact lens	Binocular	Low Vision	Cataract investigation
1	200	20	10	10	20
2	110	0	10	3	12
3	130	2	2	0	13
4	120	12	13	4	10
5	200	15	15	7	20
6	100	15	15	6	12
7	150	18	20	2	20
8	140	4	15	1	13
9	150	13	13	3	13
10	150	0	10	20	20
11	200	0	18	5	20
12	160	0	10	0	14
13	200	10	20	10	20
14	180	16	20	2	10
15	200	20	20	10	10
16	140	0	12	3	20
17	200	13	20	10	20
18	150	15	15	4	10
19	180	12	8	9	20
20	130	0	12	13	20
21	180	16	14	5	10
22	140	7	10	1	15
23	205	10	20	17	20
24	140	0	10	3	12
25	150	20	20	1	13
26	180	18	18	8	10
27	120	12	4	1	10
28	120	0	10	0	12
29	150	15	15	5	15
Average	157.7586	9.758621	13.75862	5.62069	14.96551724
Maximum	205	20	20	20	20
Minmum	100	0	2	0	10