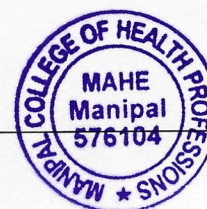




## 2. PROGRAM EDUCATION OBJECTIVES (PEOs)

The overall objective of the learning outcome-based curriculum framework (LOCF) for Bachelor of Optometry Program are as follows:

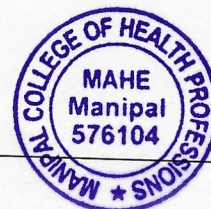
PEO No.	Education Objective
PEO 1	Students will be able to use their fundamental knowledge and clinical competence in vision care as and when required to achieve professional excellence.
PEO 2	Students will demonstrate strong and well defined clinical / practical skills relevant to Optometry.
PEO 3	Students will be able to practice the profession with highly professional and ethical attitude, strong communication skills, and effective professional skills to work in a inter-disciplinary team.
PEO 4	Students will be able to use interpersonal and collaborative skills to identify, assess and formulate problems and execute the solution for all the common vision related problems.
PEO 5	Students will be able to imbibe the culture of research, innovation, entrepreneurship and incubation.
PEO 6	Students will be able to participate in lifelong learning process for a highly productive career and will be able to relate the concepts of vision science towards serving the cause of the society.





### 3. GRADUATE ATTRIBUTES

S No.	Attribute	Description
1	<b>Professional Knowledge</b>	Demonstrate <b>scientific knowledge and understanding</b> to work as a health care professional
2	<b>Clinical / practical skills</b>	Demonstrate <b>Clinical/ practical skills</b> in order to implement the preventive, assessment and management plans for quality vision care services
3.	<b>Communication</b>	Ability to communicate effectively and appropriately in writing and orally to patients/clients, caregivers, other health professionals and other members of the community
4.	<b>Cooperation/Teamwork</b>	Ability to work effectively and respectfully with interdisciplinary team members to achieve coordinated, high quality health care
5.	<b>Professional ethics</b>	Ability to identify ethical issues and apply the ethical values in the professional life
6.	<b>Research / Innovation-related Skills</b>	A sense of inquiry and investigation for raising relevant and contemporary questions, synthesizing and articulating.
7.	<b>Critical thinking and problem solving</b>	Ability to think critically and apply once learning to real-life situations
8.	<b>Reflective thinking</b>	Ability to employ reflective thinking along with the ability to create the sense of awareness of oneself and society
9.	<b>Information/digital literacy</b>	Ability to use ICT in a variety of learning situations
10.	<b>Multi-cultural competence</b>	Ability to effectively engage in a multicultural society and interact respectfully
11.	<b>Leadership readiness/qualities</b>	Ability to respond in an autonomous and confident manner to planned and uncertain situations, and should be able to manage themselves and others effectively
12.	<b>Lifelong Learning</b>	Every graduate to be converted into lifelong learner and consistently update himself or herself with current knowledge, skills and technologies. Acquiring Knowledge and creating the understanding in learners that learning will continue throughout life.

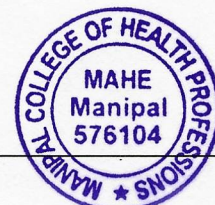




### 5. PROGRAM OUTCOMES (POs):

After successful completion of Bachelor of Optometry program, students will be able to:

PO No.	Attribute	Competency
PO 1	<b>Professional knowledge</b>	Apply the <b>knowledge</b> of basic and applied sciences in the diagnosis and management of ocular/visual conditions.
PO 2	<b>Clinical/ Technical skills</b>	Provide quality <b>eye and vision care</b> through comprehensive and appropriate examination, diagnosis and management of eye and vision conditions.
PO 3	<b>Teamwork</b>	Demonstrate <b>teamwork skills</b> by engaging in community activities to reduce the burden of avoidable blindness, occupation related ocular disorders and promote interdisciplinary care.
PO 4	<b>Ethical value &amp; professionalism</b>	Possess and demonstrate <b>ethical values and professionalism</b> within the legal framework of the society.
PO 5	<b>Communication</b>	<b>Communicate clearly and effectively</b> with patients and other health professionals for optimal health outcomes.
PO 6	<b>Evidence based practice</b>	Demonstrate high quality <b>evidence-based practice</b> that leads to excellence in professional practice.
PO 7	<b>Life-long learning</b>	Able to perform and disseminate at least basic research relevant to optometry and vision science and thereby engaging in <b>continual professional development</b> .
PO 8	<b>Entrepreneurship, leadership and mentorship</b>	Develop an <b>entrepreneurial spirit</b> in the process of setting up optometry practice and promoting cost-effective ways of identification and management of ocular/visual conditions.





**6. COURSE STRUCTURE, COURSE WISE LEARNING OBJECTIVE, COURSE OUTCOMES (COs)**

**SCHEME OF CURRICULUM**

**SEMESTER - I**

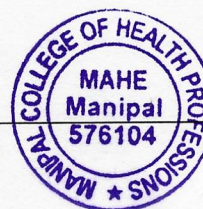
Course Code	Course Title	Credit Distribution				Marks Distribution		
		(L, T, P are hours/week)				IAC	ESE	Total
		L	T	P	CR			
ANA1103	Anatomy	3	-	-	3	30	70	100
PHY1101	Physiology - I	2	-	-	2	30	70	100
CSK1001	Communication skills	2	-	-	2	100	-	100
OPT1101	Physical Optics - Theory	2	1	-	3	50	50	100
OPT1111	Physical Optics - Practical	-	1	2	2	100	-	100
OPT1102	Geometric Optics - I Theory	2	1	-	3	50	50	100
OPT1112	Geometric Optics - I practical	-	1	2	2	100	-	100
OPT1103	Ocular Basic Science - I	2	1	-	3	50	50	100
<b>Total</b>		<b>13</b>	<b>5</b>	<b>4</b>	<b>20</b>	<b>510</b>	<b>290</b>	<b>800</b>

ESE of ANA1103 & PHY1101 will be conducted out of 50 and normalized to 70.  
ESE of OPT1101, OPT1102, OPT1103 will be conducted out of 100 and normalized to 50.

**SEMESTER - II**

Course Code	Course Title	Credit Distribution				Marks Distribution		
		(L, T, P are hours/week)				IAC	ESE	Total
		L	T	P	CR			
PHY1201	Physiology - II	2	-	-	2	30	70	100
BIC1201	Biochemistry	3	-	-	3	30	70	100
EIC1001	Environmental Science and Indian constitution	2	-	-	2	100	-	100
OPT1201	Geometric Optics - II Theory	2	1	-	3	50	50	100
OPT1211	Geometric Optics - II practical	-	1	2	2	100	-	100
OPT1202	Ocular Basic Science - II	2	1	-	3	50	50	100
OPT1212	Clinical Optometry - Evidence and Practice	-	1	4	3	50	50	100
OPT1203	Mathematics	2	-	-	2	100	-	100
<b>Total</b>		<b>13</b>	<b>4</b>	<b>6</b>	<b>20</b>	<b>510</b>	<b>290</b>	<b>800</b>

ESE of PHY1201 & BIC1201 will be conducted out of 50 and normalized to 70.  
ESE of OPT1201, OPT1202 will be conducted out of 100 and normalized to 50.





**SEMESTER - III**

Course Code	Course Title	Credit Distribution				Marks Distribution		
		(L, T,P are hours/week)				IAC	ESE	Total
		L	T	P	CR			
PAT2101	Pathology	2	-	-	2	30	70	100
MCB2101	Microbiology	2	-	-	2	30	70	100
*** ****	Open Elective - I	-	-	-	3	S/NS		
OPT2101	Optometric instrumentation	2	1		3	50	50	100
OPT2102	Optics of visual system	1	1	-	2	50	50	100
OPT2103	Optical dispensing - I	1	1	-	2	50	50	100
OPT2104	Refractive errors	2	-	-	2	50	50	100
OPT2111	Clinical examination techniques - I	-	2	4	4	100	-	100
<b>Total</b>		<b>10</b>	<b>5</b>	<b>4</b>	<b>20</b>	<b>360</b>	<b>340</b>	<b>700</b>

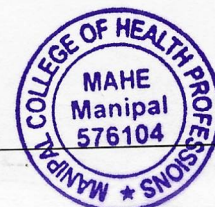
*\*Students make a choice from the pool of open electives offered by MAHE.  
ESE of PAT2101 & MCB2101 will be conducted out of 50 and normalized to 70.  
ESE of OPT2101 will be conducted out of 100 and normalized to 50.*

**SEMESTER - IV**

Course Code	Course Title	Credit Distribution				Marks Distribution		
		(L, T,P are hours/week)				IAC	ESE	Total
		L	T	P	CR			
PHC2202	Pharmacology	2	-	-	2	100	-	100
BST3201	Biostatistics & Research Methodology	3	-	-	3	30	70	100
GPY2204	General Psychology	2	-	-	2	100	-	100
OPT2201	Ocular Diseases - I	1	1	-	2	50	50	100
OPT2202	Visual perception	2		-	2	50	50	100
OPT2203	Optical dispensing - II	1	1	-	2	50	50	100
OPT2204	Ocular Microbiology and Pharmacology	2	-	-	2	50	50	100
OPT2211	Clinical examination techniques - II	-	-	4	2	50	50	100
OPT****	Program Elective - I	1	2	-	3	50	50	100
<b>Total</b>		<b>14</b>	<b>4</b>	<b>4</b>	<b>20</b>	<b>530</b>	<b>370</b>	<b>900</b>

ESE of BST3201 will be conducted out of 50 and normalized to 70.

100  
(to be corrected)





**SEMESTER - V**

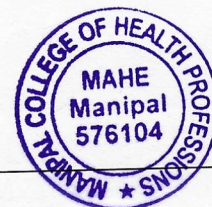
Course Code	Course Title	Credit Distribution				Marks Distribution		
		(L, T, P are hours/week)				IAC	ESE	Total
		L	T	P	CR			
OPT3101	Ocular Disease - II	2	1	-	3	50	50	100
OPT3102	Contact Lens - I	2	1	-	3	50	50	100
OPT3103	Pediatric optometry and Binocular Vision - I	2	1	-	3	50	50	100
OPT3104	Low Vision	1	1	-	2	50	50	100
OPT3105	Geriatric optometry and systemic diseases	1	1	-	2	50	50	100
OPT3111	Clinical examination techniques - III	-	-	8	4	50	50	100
*** ****	Open elective - II	-	-	-	3	S/NS		
<b>Total</b>		<b>8</b>	<b>5</b>	<b>8</b>	<b>20</b>	<b>300</b>	<b>300</b>	<b>600</b>

*\*Students make a choice from the pool of open electives offered by MAHE.  
ESE for OPT3101, OPT3102, OPT3103 will be conducted out of 100 and normalized to 50.*

**SEMESTER - VI**

Course Code	Course Title	Credit Distribution				Marks Distribution		
		(L, T, P are hours/week)				IAC	ESE	Total
		L	T	P	CR			
OPT3201	Contact Lens - II	1	1	-	2	50	50	100
OPT3202	Pediatric optometry and Binocular Vision - II	2	1	-	3	50	50	100
OPT3203	Occupational & Community Optometry	1	1	-	2	50	50	100
OPT3251	Project work	-	2	6	5	50	50	100
OPT3211	Clinical examination techniques - IV	-	1	8	5	50	50	100
OPT****	Program Elective - II	1	2	-	3	50	50	100
<b>Total</b>		<b>5</b>	<b>8</b>	<b>14</b>	<b>20</b>	<b>300</b>	<b>300</b>	<b>600</b>

ESE for OPT3202 will be conducted out of 100 and normalized to 50.



### Open Electives

Open elective is credited, choice-based and is graded as satisfactory / not satisfactory (S/NS). Students make a choice from pool of electives offered by MAHE institution / Online courses as approved by the department

### Program Electives

Program elective is credited and choice-based. The students make a choice from pool of electives offered by the department. The ESE is conducted for 50 marks.

Semester	Course Code	Course Title	Credit (s) Distribution (L,T,P,CL are hours/week)				
			L	T	P	CL	CR
IV Semester	OPT2241	Myopia Control	1	2	-	-	3
	OPT2242	Visual Psychophysics	1	2	-	-	3
	OPT2243	Basics of Ocular Histology	1	2	-	-	3
VI Semester	OPT3241	Ophthalmic Imaging	1	2	-	-	3
	OPT3242	Advanced Dispensing and practice management	1	2	-	-	3

### SEMESTER - VII

Course Code	Course Title	Credit Distribution (hours/week) *					Marks Distribution		
		L	T	P	CL	CR	IAC	ESE	Total
		OPT4131	Internship - I	-	3	-	45	18	100
<b>Total</b>		-	3	-	45	18	100	-	100

\*24 weeks  
Note: Internship mark to be reflected in final CGPA calculation

### SEMESTER - VIII

Course Code	Course Title	Credit Distribution (hours/week)					Marks Distribution		
		L	T	P	CL	CR	IAC	ESE	Total
		OPT4231	Internship - II	-	3	-	45	18	100
<b>Total</b>		-	3	-	45	18	100	-	100

\*24 weeks  
Note: Internship mark to be reflected in final CGPA calculation