CO PO MAPPING (Matrix)

Programe - First Year B.Sc

Semester - Smester I & II

PO1 - Knowledge & Skill Development- An ability to apply knowledge of healthcare technology (including clinical subjects, investigations/ Procedures, handling instruments)

PO2 – Critical Thinking – To apply professional judgment and rational thinking in decision-making
PO3 – Problem solving – Correlation of professional knowledge applied to current clinical or healthcare practices.

PO4 -Professional ethics – To adopt and apply code of ethics prescribed by professional bodies in professional and social context. Maintain appropriate boundaries with patients and care givers and maintain confidentiality.

PO5 - Communication skills - To communicate effectively with the patients, care givers and other healthcare professional for addressing patient related issues and to deliver and information

PO6 – Individual / Team work - ability to function on multi-disciplinary teams

PO 7- Holistic development: Development of intellectual mental, Physical, Emotional & Social abilities, so as to be capable of facing the demands & challenges of every day life.

PO8 – Lifelong learning - To develop continuous learning attitude in context of research, advances in clinical practices and to inculcate professionalism and evidence based practices

PO Mapping same with correlation level 3,2,1 The notation of 1 - low, 2 - moderate, 3 - high

			PO Mapping same with correlation level 3,2,1	The notation of 1 - low, 2 - moderate, 3 -	high							
				Knowledge & Skill Development	Critical Thinkin g	Problem solving	Professi onal ethics	Commu nication skills	Individu al / Team work	develop	Lifelong learning	
Semester	Course / Course Code	Course Outeco me	Details	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	
		CO1	Define basic technical terminology and language associated with anatomy	2	1	2	0	0	1	0	1	0.7
	Human Anatomy- Part I	CO2	Identify and describe the gross anatomy and microscopic structures of various tissues and organs in the human body and correlate their structure with the functions as a prerequisite for understanding the altered state in various diseases	3	1	2	0	0	0	0	1	1.2
			Demonstrate and understand the anatomy of skeletal system, muscular system, joints, respiratory system, circulatory system, digestive system and excretory system theoretically as well as in the dissected specimen	3	1	1	0	0	0	0	1	0.7
	Average			2.7	1.0	1.7	0.0	0.0	0.3	0.0	1.0	0.8
	Human Physiology Part I	CO1	Describe the basic physiological principles involved in the normal functioning of the human body & Apply the physiological principles in comprehending the pathophysiology of disease and its management	2	1	2	0	0	0	0	2	0.8
		CO2	Describe & understand the functional aspects of general physiology, haematology, Cardiovascular system, digestive system, Respiratory system, nerve muscle physiology	3	1	3	0	0	0	0	2	1.1
			To be able to perform the tests or techniques to evaluate the functions of organ systems & efficient to handle the equipment related to these tests also to derive, analyse, interpret the test results.	2	1	3	0	0	0	0	2	1.1
Semester 1	Average			1.4	0.6	1.6	0	0	0	0	1.2	0.6
		CO1	Understand the chemistry, metabolism and functions of biomolecules i.e. Carbohydrates, proteins, lipids, nucleic acids, enzymes and vitamins.	3	2	2	0	0	0	2	3	1.5
	General Biochemistry & Nutrition	CO2	Gain knowledge about role of various essential aspects of Nutrition and Energy balance with its related disorders	3	1	1	0	0	0	2	3	1.3
		CO3	Know the fundamentals of techniques used in collection, processing and evaluation of biological specimens in pre-examination laboratory practices	2	1	2	2	1	1	2	3	1.8
	Average			6.67	3.33	3.67	0.67	0.33	0.33	4.67	7.00	3.3

Introduction to Nat Syst (Multidisciplinary)	tem	CO1	The course provides the students a basic insight into the main features of Indian health care delivery system and how it compares with other systems of the world .	3	2	1	1	1	2	1	1	1.5
Aver	rage			3	2	1	1	1	2	1	1	1.5
		CO1	Able to express better	2	3	1	1	1	1	1	1	1.4
English and Com	nunication Skills	CO2	Grow personally and professionally and develop confidence in every field	2	2	2	2	2	2	2	2	2.0
Avei	age			2	2.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7
		CO1	Understand and define terminology commonly used in environmental sciences	2	2	2	2	2	2	2	2	2.0
		CO2	To understand the processes that govern the interactions with organism with the biotic and abiotic	2	2	1	1	2	2	2	1	1.6
Environmen	tal Sciences	CO3	Understand the relatinship between people and the environment	2	2	1	2	2	2	2	2	1.9
Avei	age			2.0	2.0	1.3	1.7	2.0	2.0	2.0	1.7	1.8
		CO1	Define basic technical terminology and language associated with anatomy	2	1	2	0	0	0	0	2	0.9
Human Ana	tomy Part II	CO2	Identify and describe the gross anatomy and microscopic structures of various tissues and organs in the human body and correlate their structure with the functions as a prerequisite for understanding the altered state in various diseases	2	1	2	0	0	0	0	2	0.9
		CO3	Demonstrate and understand the anatomy of reproductive system, endocrine system ,nervous system ,sensory system, & lymphatic system theoretically as well as in the dissected specimen	2	1	2	0	0	0	0	2	0.9
Avei	age			2.0	1.0	2.0	0.0	0.0	0.0	0.0	2.0	0.9
		CO1	Describe the basic physiological principles involved in the normal functioning of the human body & Apply the physiological principles in comprehending the pathophysiology of disease and its management	2	1	1	2	1	2	1	2	1.5
Human Physi	ology Part II	CO2	Describe & understand the functional aspects of nervous system, endocrine system, special senses, skin, Reproductive system, excretory system.	2	1	2	0	0	0	0	2	0.9
		CO3	To be able to perform the tests or techniques to evaluate the functions of organ systems & efficient to handle the equipment related to these tests also to derive, analyse, interpret the test results.	2	1	2	0	0	0	0	2	0.9
Aver	age		V - 1	2.0	1.0	1.7	0.7	0.3	0.7	0.3	2.0	1.1
		CO1	Operate and use the light compound microscope and perform microbiological laboratory procedures according to appropriate safety standards .	3	2	2	0	0	0	0	2	1.1
General Mi	crobiology	CO2	Demonstrate and interpret the findings of common laboratory techniques like various staining methods , wet mounts , peripheral smears for demonstration of microorganisms from various clinical specimens	3	1	2	0	0	0	0	2	1.0
2 Aver	age			3	1.5	2	0	0	0	0	2	1.1
Basic Pathology	J	CO1	Describe the rationale & principles of technical procedures of diagnostic laboratory tests and interpret diagnostic laboratory tests & correlate with clinical & morphological features of diseases.	2	1	2	0	0	0	0	1	0.8
			To aid haematology in the reference ranges for haemoglobin , haemocrit ,	1	1	2	0	0	0	0	1	0.6
Avei		CO2	erythrocytes and leukocytes in infants children and adults .	1.5	1	2	0	0	0	0		0.7

Introduction to Quality and Patient safety		Student should be able to apply healthcare quality improvement and patient safety principles, concepts and methods at the micro- meso-, and macro-system levels	2	3	2	3	2	3	2	3	2.5
Average			2	3	2	3	2	3	2	3	2.5
	CO1	Student will be able to recognise what constitues an ethical concern in healthcare .Understand ethical issues in healthcare concern	3	3	0	2	2	3	2	2	2.1
Medical Bioethics & IPR	CO2	Capacity to rationally justify your decisions and understand complexity and multi - dimensionality of medical ethical concerns and uniqueness of each problem and develop the ability to reason through difficult medical or clinical ethical issues	2	3	0	2	2	2	2	2	1.9
		Student gets awareness of acquiring and writing their own patent and copyright for their own innovative works and get the knowledge of plagarism in their innovations which can be questioned legally	3	3	0	2	2	2	3	3	2.3
Average			2.7	3.0	0.0	2.0	2.0	2.3	2.3	2.3	2.1
		Students acquire conceptual clarity and develop respect for norms and values of freedom, equality, fraternity and justice	3	2	0	2	0	1	2	1	1.4
		Awareness of civil society organizations and movements promoting human rights	2	1	0	2	0	1	1	1	1.0
Human Rights & Professional Values/SEC 002L	CO3	Make the students realize the difference between values of human rights and their duties	2	2.5	0	2	0	1	1.5	1	1.3
Average			2.3	1.8	0.0	2.0	0.0	1.0	1.5	1.0	1.2

			MAPPING AVERAG	E						
Semester	Subject	PO1	P02	PO3	PO4	PO5	PO6	PO7	PO8	Average
	Human Anatomy- Part I	2.7	1.0	1.7	0.0	0.0	0.3	0.0	1.0	0.8
	Human Physiology Part I	1.4	0.6	1.6	0	0	0	0	1.2	0.6
	General Biochemistry & Nutrition	6.80	3.33	3.70	0.70	0.33	0.33	4.70	7.00	3.4
Semester 1	Introduction to National Health Care System (Multidisciplinary/Interdisciplinary)	3	2	1	1	1	2	1	1	1.5
	English and Communication Skills AEC 001L	2	2.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7
	Environmental Sciences	2.0	2.0	1.3	1.7	2.0	2.0	2.0	1.7	1.8
	Human Anatomy Part II	2.0	1.0	2.0	0.0	0.0	0.0	0.0	2.0	0.9
	Human Physiology Part II	2.0	1.0	1.7	0.7	0.3	0.7	0.3	2.0	1.1
	General Microbiology	3	1.5	2	0	0	0	0	2	1.1
Samactar 2	Basic Pathology & Hematology	1.5	1	2	0	0	0	0	1	0.7

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Introduction to Quality and Patier safety	2	3	2	3	2	3	2	3	2.5
Medical Bioethics & IPR	2.3	3.0	0.7	2.3	2.0	2.3	2.3	2.7	2.2
Human Rights & Professional Values	2.3	1.8	0.0	2.0	0.0	1.0	1.5	1.0	1.2

				CO & PO Relationships (Mapp		h)									
				Programe - First Year											
	Τ		T	Semester - Smester III, IV	/, V & VI	T							1		T
				CO & PO Relationships	Domain	Unit	Lec	cture	L	.ab	Cl	inical		Total	Strength Level of CO addressing to PO Level 3:>50%, Level 2: 30%-50%, Level 1:< 30%,
Semester	Course & Course code	CO	CO Detail	PO1-PO8	C.A.P	No	Hrs	%	Hrs	%	Hrs	%	Hrs	%	Not addressed :<5%
		CO1			C.P	1unit	5	11.1%	2	4%	0		7	6.67%	1
			Define basic technical terminology and language associated with anatomy	PO1 ,PO2,PO3 ,PO5, PO8		-9						1			_
	Human Anatomy- Part I		Identify and describe the gross anatomy and microscopic structures of various tissues and organs in the human body and correlate their structure with the functions as a prerequisite for understanding the altered state in various diseases	PO1 ,PO2,PO3 ,PO5, PO8	C.P	2,3,4,5,6,7,8	20	44.4%	28	62%	0		48	45.71%	3
			Understand and demonstrate the anatomy of Respiratory system,												
		CO3	Circulatory system, Digestive system and Excretory system with it's clinical application	204 203 203 205 203	C.P	2,3,4,5,6,7,8	20	44.4%	30	50%	0		50	47.62%	3
	Average			PO1 ,PO2,PO3 ,PO5, PO8			45	100.0%	60	100%			105	100.00%	
	Avelage						43	100.070	- 00	10070			103	100.00 /0	
			Describe physiological basic principles involved in normal funtioning of the human body and apply the physiological principles in comprehending the pathophysiology of the disease and it's management.	PO1, PO2 , PO3 , PO4,PO5,PO6,PO8	C.P	1,2,3,4,5,6	16	35.56%	30	50.00%			46	43.81%	3
	Human Physiology Part I	CO2	To understand the basic mechanism operating and regulatory mechanism of each organ systems .	PO1, PO2 , PO3 , PO4,PO5,PO6,PO8	C.P	2,3,4,5,6	13	28.89%		0	0		13	12.38%	2
			To be able to perform the tests or techniques to evaluate the funtioning of organ systems and to be efficient to handle the equipment related to these tests, derive analyse and interpret the results as normal and abnormal.	PO1, PO2 , PO3 , PO4,PO5,PO6,PO8	C.A.P	1,2,3,4,5,6	16	35.56%	30	50%	0		46	43.81%	3
	Average						45	100%	60	100%	0		105	100%	
Semester 1		CO1	Understand the chemistry, metabolism and functions of biomolecules i.e. Carbohydrates, proteins, lipids, nucleic acids, enzymes and vitamins.	PO1, PO2 , PO3 ,PO7, PO8	C.P	1,2,3,4,5	40	66.67%	30	50%	0		70	58%	3
	General Biochemistry & Nutrition	CO2	Gain knowledge about role of various essential aspects of Nutrition and Energy balance with its related disorders	PO1, PO2 , PO3 ,PO7, PO8	C.P	6, 9	10	16.67%	5	8.33%			15	13%	1
		CO3	Know the fundamentals of techniques used in collection, processing and evaluation of biological specimens in pre-examination laboratory practices	PO1, PO2 , PO3 , PO4, PO5, PO6, PO8	C.A.P	7, 8	10	16.67%	25	41.7%			35	29%	2
	Average						60	100%	60	100%			120	100%	
	Introduction to National Health Care System (Multidisciplinary/Interdisciplinary)		The course provides the students a basic insight into the main features of Indian health care delivery system and how it compares with other systems of the world .	PO1, PO2 , PO3 , PO4,PO5,PO6,PO8	C.A.P	1,2,3,4,5,6	45	100%		0			45	100%	3
	Average						45	100%		0			45	100%	
	English and Communication Skills	CO1	Able to express better	PO1 ,PO2,PO3 ,PO4, PO5,PO6,PO7, PO8	C .A.P	1,2,3,4,5,6,7,8,9,10		56%		0			45		3
	AEC 001L	CO2	Grow personally and professionally and develop confidence in every field	PO1 ,PO2,PO3 ,PO4, PO5,PO6,PO7, PO8	C.A.P	3,4,5,6,7,8,9,10	20	44%		0			33		3
	Average	co:					45	100%		0			45		-
		CO1	Understand and define terminology commonly used in environmental sciences	PO1 ,PO2,PO3 ,PO4, PO5,PO6,PO7, PO8	C.P	1,2,3,4,5,6	15	33%		0			15	33%	2

		CO2	To understand the processes that govern the interactions with organism with the biotic and abiotic		C .P	1,2,3,4,5,6	15	33%		0			15	33%	2
	F	CO3	Understand the relationship between people and the environment	PO1 ,PO2,PO3 ,PO4 ,PO5,PO6,PO7 ,PO8	C.P	1,2,3,4,5,6	15	33%		0			15	33%	2
	Environmental Sciences/AEC 002L Average			PO1 ,PO2,PO3 ,PO4, PO5,PO6,PO7, PO8			45	100%		0			45	100%	
	_	CO1	Define basic technical terminology and language associated with anatomy	PO1 ,PO2,PO3 ,PO4, PO5,PO6,PO7,PO8	С.Р	1,2,3,4,5	10	33%	20	33%	0		30	33%	3
	Human Anatomy Part II		Identify and describe the gross anatomy and microscopic structures of various tissues and organs in the human body and correlate their structure with the functions as a prerequisite for understanding the altered state in various diseases	PO1 ,PO2,PO3 , PO5,PO6,PO8	C.P	1,2,3,4,5	10	33%	20	33%	0		30	33%	3
_			Understand and demonstrate the anatomy of reproductive system, endocrine system, nervous system, sensory system, & lymphatic system with its applied aspects.	PO1 ,PO2,PO3 , PO5,PO6,PO8	C.P	1,2,3,4,5	10	33%	20	33%	0		30	33%	3
	Average						30	100%	60	100%	0.0		90	100%	
			Describe physiological basic principles involved in normal funtioning of the human body and apply the physiological principles in comprehending the pathophysiology of the disease and it's management.	PO1 ,PO2,PO3 , PO5,PO6,PO8	C.P	1,2,3,4,5,6	10	33%	16	53%			26	43%	3
	Human Physiology Part II		To understand the basic mechanism operating and regulatory mechanism of each organ systems .	PO1 ,PO2,PO3 , PO5,PO6,PO8	C.P	1,2,3,4,5,6	10	33%	8	27%			18	30%	3
			To be able to perform the tests or techniques to evaluate the funtionins of organ systems and to be efficient to handle the equipment related to these tests, derive analyse and interpret the results as normal and abnormal.	PO1 ,PO2,PO3 , PO5,PO6,PO8	C.A .P	1,2,3,4,5,6	10	33%	6	20%			16	27%	3
	Average						30	100%	30	100%	0.0		60	100%	
			To demonstrate knowledge of microoganisms and disease caused , as well as to perform microbiological laboratory procedures .	PO1 ,PO2,PO3 , PO5,PO6,PO8	C.A.P	1,2,3,4,5,6,7,8,9	38	84%	36	60%	0		74	70%	3
	General Microbiology/BMLT 108 L	CO2	To have basic knowledge about serology and immunology	PO1 ,PO2,PO3 , PO5,PO6,PO8	C.P	5	3	7%	8	13%	0		11	10%	1
			Demostrate basic knowledge and practise of infection ,control and safety precaution while working in hospital / laboratory .	PO1 ,PO2,PO3 , PO5,PO6,PO8	C.A.P	3,4	4	9%	16	27%	0		20	19%	1
	Average						45	100%	60	100%	0	13.4	105	100%	
Semester 2	Basic Pathology & Hematology/BMLT 109 L	CO1	The student should have basic knowledge hematology and cytology and clinical pathology .	PO1 ,PO2,PO3 ,PO4, PO5,PO6,PO7,PO8	С	1,2,3,4,5,6,7,8,9,10,11,12	30	50%	0		0		30	50%	3
			Student should knowparts, basic functions and operation of microscope . Interpret diagnostic laboratory results and corelate it with sign and symptoms of patients.	PO1 ,PO2,PO3 , PO5,PO6,PO8	C.A.P	1,2,3,4,5,6,7,8,9,10,11,12	30	50%	0		0		30	50%	3
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Introduction to Quality and Patient safety/BMLT 110 L	CO1	To apply healthcare quality improvement and patient safety principles ,concepts , and methods at the micro -meso- and macrosystem level	PO1 ,PO2,PO3 , PO5,PO6,PO8	C.A.	1,2,3,4,5,6	45	100%	0	0	0	0.0	45	100	3
Average	COI					45	100%				5.8	45	100	
	CO1	Student will be able to recognise what constitues an ethical concern in healthcare .Understand ethical issues in healthcare concern	PO1 ,PO2,PO3 ,PO4, PO5,PO6,PO7,PO8	C.A.P	1,2,3,4,5,6	15	33%	0	0	0	0.0	15	33%	2
Medical Bioethics & IPR/SEC 001L	CO2	Capacity to rationally justify your decisions and understand complexity and multi - dimensionality of medical ethical concerns and uniqueness of each problem and develop the ability to reason through difficult medical or clinical ethical issues	PO1 ,PO2,PO3 ,PO4, PO5,PO6,PO7,PO8	C.A.P	1,2,3,4,5,6	15	33%	0	0	0	0.0	15	33%	2
	CO3	Student gets awareness of acquiring and writing their own patent and copyright for their own innovative works and get the knowledge of plagarism in their innovations which can be questioned legally	PO1 ,PO2,PO3 ,PO4, PO5,PO6,PO7,PO8	C.A.P	1,2,3,4,5,6	15	33%	0	0	0	0.0	15	33%	2
Average						45	100%				5.8	45	100%	
	CO1	Students acquire conceptual clarity and develop respect for norms and values of freedom, equality, fraternity and justice	PO1 ,PO2,PO3 ,PO4, PO5,PO6,PO7,PO8	C.A.P	1,2,3,4,5,6,7	15	33%	0	0	0	0.0	15	33%	2
	CO2	Awareness of civil society organizations and movements promoting human rights	PO1 ,PO2,PO3 ,PO4, PO5,PO6,PO7,PO8	C.A.P	1,2,3,4,5,6,7	15	33%	0	0	0	0.0	15	33%	2
Human Rights & Professional	CO3	Make the students realize the difference between values of human rights and their duties	PO1 ,PO2,PO3 ,PO4, PO5,PO6,PO7,PO8	C.A.P	1,2,3,4,5,6,7	15	33%	0	0	0	0.0	15	33%	2
Average						45	100%	0.0	0.0	0.0	0.0	45	100%	
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CO PO MAPPING (Matrix)
Programe - Bsc Medical Lab Technology

Semester - Smester III, IV, V & VI

PO1 - Knowledge & Skill Development - An ability to apply knowledge of healthcare technology (including clinical subjects, investigations' Procedures, handling instruments)
PO2 - Critical Thinking - To apply professional judgment and rational thinking in decision-making
PO3 - Problem solving - Correlation of professional knowledge applied to current clinical or healthcare practices.
PO4 -Professional chies - To adopt and apply code of clinics prescribed by professional and social context. Maintain appropriate boundaries with patients and care given and maintain confidentiality.
PO3 - Communication skills - To communicate effectively with the patients, care gives and other healthcare professional for addressing patient related issues and to deliver and information
PO6 - Individual / Taum work - shifty to function on multi-disciplinary teams

PO 7- Holistic de		ulti-disciplinary teams al mental, Physical, Emotional & Social abilities, so as to be capable of facing the demands & challenges of every day life. gentitude in context of research, advances in clinical practices and to inculcate professionalism and evidence based practices									
		PO Mapping same with correlation level 3,2,1 The notation of 1 - low, 2 - moderate, 3 - high	Knowledge &	Critical		rofessional	Communicati		Holistic	Lifelong	
		Cours	Development		solving				development	-	Average
Semester	Course / Course Code	Outco CO Detail me	PO1	P02	PO3	PO4	PO5	PO6	PO7	PO8	
	Fundamental of Biochemistry - I/BMLT 112L	CO1 At the end of semester students shall be able to develop expiremental & analytical skills.	3	3	3	3	3	3	3	3	3.0
	Average		3	3	3	3	3	3	3	3	3.0
	Fundamentals of Microbiology-I/BMLT 113 L		3	3	3	3	3	3	3	3	3.0
		Theory and Lab courses provide the student with the study of normal flora and pathogenic microorganisms. Methods for recovery, identification of pathogens, culture techniques, procedures, and antibiotic testing and sterilization techniques.								\sqcup	
	Average	CO2 Get an idea of universal safety precautions.	3	3	3	3	3	3	3	3	3.0
			3	3	3	3	3	3	3	2	2.9
		At the end of the semester the student should be know the basic concepts in hematology and clinical pathology	2	2	2	-	-	2	2	1	
	Hematology and Clinical	He should be able to collect blood under guidance CO3 Should perform urine experiments under guidance	3	3	3	3	3	3	3	3	3.0
	Average	and perform time experimental time is guitance.	3	3	3	3	3	3	3	2.7	3.0
			1	1	1.5	1	1.5	0.5	1.5	1	1.1
		Students will become self dependent, more decisive and develop intuitive ability for their study and career related matter.	1	1	1.5	1	1.5	0.5	1	1	1.1
		CO2 Student's ability to present their ideas will be developed.				1	1.5	1	1.5		
Semester 3		Enhanced communication skills, public speaking & improved Presentation ability.	1	1	1	1	1.5	1	1.5	1	1.1
	Pursuit of Inner Self Excellence (POIS)/GEC 001L		1	1	1.5	1	1	1.5	1	1	1.1
		Students will be able to explore their inner potential and inner ability to become a successful researcher or technician & hence become more focused.								1	
		COS Students will observe significant reduction in stress level.	1	1	1	1	1	1.5	1	1.5	1.1
			1	1	1.5	1	1	1	1	1.5	1.1
	Average	With the development of personal attributes like Empathy, Compassion, Service, Love & brotherhood, students will serve the society and industry in better way with teamwork and thus grow professionally.	1.0	1.0	1.3	1.0	1.3	1.0	1.2	1.2	1.1
	·										
		CO1 Describe and apply motivation theories to team and organizational scenarios in order achieve a team's or an organization's goals and objectives.	1	1	1.5	2	1	1.5	1	1	1.3
		DESCRIBE and apply mouvacion decires to team and organizational scenarios in order achieve a team s or an organization s goas and objectives.									
			1	1	1.5	2	1	1	1	1	1.2
		CO2 Explain the effect of personality, attitudes, perceptions and attributions on their own and other's behaviors in team and organizational settings.									
			1	1	1.5	1.5	1	1.5	1	1	1.2
	Organizational										
		ECO3 Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style.	1.0	1.0	1.5	1.8	1.0	1.3	1.0	1.0	1.2
	Fundamental of Biochemistry - II/BMLT 116 L		3	3	3	3	3	3	3	3	3.0
		CO1 At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory									

	Average		3	3	3	3	3	3	3	3 3.0
	Fundamentals of Microbiology-II/BMLT 117 L		3	3	3	3	3	3	3	3 3.0
	cc	1 This part is designed to study the details of systemic bacteriology including its morphology, species, lab diagnosis, isolation and identification.	3	3	3	3	3	3	3	3 3.0
	Average CO	The knowledge of related diseases with its brief clinical features will be gained.	3	3	3	3	3	3	3	3 3.0
			3	3	3	3	3	3	3	3 3.0
	i co	1 Students will have knowledge about various glassware, equipments.	3	3	3	3	3	3	3	3 3.0
Semester 4		2 Students will be able to prepare percent, normal, molar solutions								
	Hematology and Clinical Pathology - II/BMLT 118 L CC Average	Analytical skill for examination of body fluids, blood pH and electrolytes.	3	3	3	3	3	3	3	3 3.0
	Average									
	Computer and Applications/AEC 003 L	Discuss about health informatics and different IT applications in allied health care.	1	1.5	1	1.5	1	2	1	1 1.
	co	Explain the function of Hospital Information Systems Analyze medical standards	1	2 1.5	1.5	1.5	1	1.5 1.5	1	1 1.3
	Average	A Principle metrical standards	1.0	1.7	1.3	1.7	1.0	1.7	1.0	1.0 1.3
	co	1 To understand the importance & Methodology for research	2.5	1.5	2	2	2.5	2	3	3 2.0
	Biostatistics and Research Methodology/AEC 004 L									
	Methodology/AEC 004 E		2	2	2	2	2.5	3	3	2 2.:
		To learn in detail about sampling, probability and sampling distribution, significance tests correlation and regression, sample size determination, study design and multivariate analysis.								
	Average		2.25	1.75	2	2	2.5	2.5	3	2.5 2.0
			3	3	3	3	3	3	3	3 3.0
	Clinical Biochemistry -									
	I/BMLT 120 L CO Average	At the end of semester students shall be able to develop technical Skills to perform various diagnostic profiles to operate Lab Information System & to report independently	3	3	3	3	3	3	3	3 3.0
			3	3	3	3	3	3	3	3 3.0
	co	Theory and Lab courses provide the student with an introduction to basiclaboratory identification and classification of medically significant isolates in mycology, parasitology.								
	Medical Microbiology- I/BMLT 121 L		3	3	3	3	3	3	3	3 3.0
	co	2 Laboratory safety, specimen selection and processing, isolation methods, immunologic diagnosis and treatment.	J					,	J	3 3
			3	3	3	3	3	3	3	3 3.0
	Average CC	3 Epidemiology and pathogenesis of mycosis, parasitic and infections are explored	3.0	3.0	3.0		3.0	3.0	3.0	3.0 3.0
	Average		3.0	5.0	3.0	3.0	3.0	5.0	3.0	3.0 3.1
			3	3	3	3	3	3	3	3 3.0
		1 The student should be able to apply the basic knowledge of hematology, histopathology, and cytology in laboratory								
	Blood Bank and General Pathology - I/BMLT 122L	The student should perform the techniques and staining procedure in histopathology and cytology	3	3	3	3	3	3	3	3 3.0
Semester 5			3	3	3	3	3	3	3	3 3.0
	Average CO	The student should be able to apply the basics of hematology and clinical pathology learnt in 3rd and 4th semester in clinical laboratory.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0 3.0
			1.5	2	2	2	1.5	2	2	2 1.9
	Basics of Clinical Skill Learning/CEC 005 L									
		1 After successful accomplishment of the course, the students would be able to Measure Vital Signs, do basic physical Examination of the patients, NG tube basics, Administration of Medicines		-						
		The students will learn about Asepsis, and the Cleanliness related to asepsis and on mobility of the patients	3	2	2	2	1.5	2	2	2 2.:
	Average	The condition of the condition and the condition as the c	2.3	2.0	2.0	2.0	1.5	2.0	2.0	2.0 2.0
			1	1	1.5	1	1	1	1	2 1.3
	co	Understand and apply resource management concepts (personnel, finance, and material resources) and the processes and strategies needed in specific hospital sectors								
	Hospital Operation Management/CEC 006 L	2 Communicate effectively and develop their leadership and teambuilding abilities	2	1	1.5	1	1	1	1	2 1.

1											
		CO3 Apply modern change management and innovation management concepts to optimize structures	1	1	1.5	1	2	1	1	2	1.3
		Analyze existing hospital service policies and enhance their alignment within the local and national context	1	1	1.5	1	2	1	1	2	1.3
	Average	Thingte change neephan set the purious and emance their significant warm the found in advance content.	1.3	1.0	1.5	1.0	1.5	1.0	1.0	2.0	1.3
	Clinical Biochemistry - II/BMLT 124 L	At the end of semester students shall be able to Work as a Laboratory Technician in Hospital Laboratories, Pharmaceutical industries & in Research institute	3	3	3	3	3	3	3	3	3.0
Semester 6	Average		3	3	3	3	3	3	3	3	3.0
	Medical Microbiology-	CO1 The main aim of this course is to train students in the field of Medical Microbiology.	3	3	3	3	3	3	3	3	3.0
	II/BMLT 125L	Theoretical as well as practical training is imparted to the students in various branches of Microbiology namely Bacteriology, Virology, Parasitology, Immunology, serology and Mycology so that they can participate in good patient care and prevention of infectious diseases in the community.	3	3	3	3	3	3	3	3	3.0
	II BINET 123E	CO3 They are introduced to basic and advanced methods used in the field of diagnostic Microbiology	3	3	3	3	3	3	3	3	3.0
	Average		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Blood Bank and General	CO1 The student be well versed with the techniques in blood banking like components and FDA regulations	3	3	3	3	3	3	3	3	3.0
	Pathology - II/BMLT 126	CO2 The B.Sc graduate should have sound knowledge and basic skills of working in a pathology lab and blood bank	3	3	3	3	3	3	3	3	3.0
	Average		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

			MAPPING AVERAGE (Programe - Bsc Medical Lab Technology)							
Semester	Subject	PO1	P02	PO3	PO4	PO5	PO6	PO7	PO8	Average
	Fundamental of Biochemistry - I/BMLT 112L	3	3	3	3	3	3	3	3	3
	Fundamentals of Microbiology-I/BMLT 113 L	3	3	3	3	3	3	3	3	3
Semester 3	Hematology and Clinical Pathology - I/BMLT 114 L	3	3	3	3	3	3	3	3	3
	Pursuit of Inner Self Excellence (POIS)/GEC 001L	1	1	1.3	1	1.3	1	1.2	1.2	1
	Organizational Behavior/GEC 002L	1	1	1.5	1.8	1	1.3	1	1	1
	Fundamental of Biochemistry - II/BMLT 116 L	3	3	3	3	3	3	3	3	3
	Fundamentals of Microbiology-II/BMLT 117 L	3	3	3	3	3	3	3	3	3
Semester 4	Hematology and Clinical Pathology - II/BMLT 118 L	3	3	3	3	3	3	3	3	3
	Computer and Applications/AEC 003 L	1	1.7	1.3	1.7	1	1.7	1	1	1
	Biostatistics and Research Methodology/AEC 004 L	2.25	1.75	2	2	2.5	2.5	3	2.5	2
	Clinical Biochemistry - I/BMLT 120 L	3	3	3	3	3	3	3	3	3
	Medical Microbiology- I/BMLT 121 L	3	3	3	3	3	3	3	3	3
Semester 5	Blood Bank and General Pathology - I/BMLT 122L	3	3	3	3	3	3	3	3	3
	Basics of Clinical Skill Learning/CEC 005 L	2.3	2	2	2	1.5	2	2	2	2
	Hospital Operation Management/CEC 006 L	1.3	ı	1.5	1	1.5	1	1	2	1
	Clinical Biochemistry - II/BMLT 124 L	3	3	3	3	3	3	3	3	3
Semester 6	Medical Microbiology- II/BMLT 125L	3	3	3	3	3	3	3	3	3
	Blood Bank and General Pathology - II/BMLT 126 L	3	3	3	3	3	3	3	3	3

			CO & PO Relationships (Mapping Strength)										
			Programe - Bsc Medical Lab Technology										
			Semester - Smester III, IV, V & VI										
				CO & PO Relationships	Domain	Unit	Lect	ture	ı	Lab	Clinic	al To	Strength Level of CO addressing to PO Level 3:>50%, Level 2: 30%-50%, Level 1:< 30%,
Semester	Course & Course code	со	CO Detail	PO1-PO8	C.A.P	No	Hrs	%	Hrs	% F	irs %	Hrs	Not addressed :<5%
	Fundamental of Biochemistry	1	At the end of semester students shall be able to develon evoiremental & analytical skills	PO1-PO8	C,A,P	1,2,3,4	30	100%	15	15%	15	50% 60	100% 3

	otal .			30	100%	15	50%	15	50%	60 100%	
Fundamentals of Microbiology-I/BMLT 113 L	POI-PC	C,A,P	1,2,3,4,6	42	93%	7	9%	8	27%	57 76%	3
<u>c</u>	Theory and Lab courses provide the student with the study of normal flora and pathogenic microorganisms. Methods for recovery, identification of pathogens, culture techniques, procedures, and antibiotic testing and sterilization techniques.										
cr	Get an idea of universal safety precautions.	C,A,P	5	3 45	7% 100%	8 15	11%	7	23% 1	18 24% 75 100%	2
				.,3	100%	13	2070	1.0	30%	3 100%	
	PO1-PC	C,A,P	1,2,3,4,6	34	76%	7.5	10%	7.5	25%	49 65%	3
cc											
cr	PO1-PC He should be able to collect blood under guidance	_		8	18%	5	7%	5		18 24%	2
Hematology and Clinical CC Pathology - I/BMLT 114 L	3 Should perform urine experiments under guidance stal	C,A,P	4	3 45	7% 100%	2.5	3% 20%	2.5		8 11%	1
Patriology - I/BIVIET 1141				45	100%	15	2070	1.5	30%	3 100%	
	PO1-PC	C,A	1,2	8	18%		I			8 18%	1
<u>a</u>	1 Students will become self dependent, more decisive and develop intuitive ability for their study and career related matter.									$\perp \perp \perp$	
	PO1-PC	C,A	2,4	7	16%		!			7 16%	1
	2 Student's ability to present their ideas will be developed.								-		
	POI-PO	C,A	1	5	11%		I			5 11%	1
	3 Enhanced communication skills, public speaking & improved Presentation ability.					+			-+	++-	
Pursuit of Inner Self	PO1-PC	3 C,A	1,3	15	33%		I			15 33%	2
xcellence (POIS)/GEC 001L			,				I				
	4 Students will be able to explore their inner potential and inner ability to become a successful researcher or technician & hence become more focused.								\rightarrow	++-	
<u>c</u>	PO1-PC Students will observe significant reduction in stress level.	C,A	1	5	11%					5 11%	1
							I				
	PO1-PC	3 C,A	4	5	11%		I			5 11%	1
		, , ,,,	'	,	1170		!			5 11/0	1
<u>c</u>	With the development of personal attributes like Empathy, Compassion, Service, Love & brotherhood, students will serve the society and industry in better way with teamwork and thus grow professionally.										
	otal			45	100%					45 100%	
	PO1-PC	B C,A	1,3,4	18	40%		I			18 40%	2
		, , ,,,,	2,5,4	10	4070		!			10 40%	-
CC	1 Describe and apply motivation theories to team and organizational scenarios in order achieve a team's or an organization's goals and objectives.										
	PO1-PC	3 C,A	2,5	14	31%		I			14 31%	2
		, , ,,,,	2,5		3270		I			5276	-
CC	2 Explain the effect of personality, attitudes, perceptions and attributions on their own and other's behaviors in team and organizational settings.									+	
							i				
	PO1-PC	B C,A	6,7	13	29%				1	13 29%	1
	PO1-PO	3 C,A	6,7	13	29%				:	13 29%	1
	PO1-PC Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style.	3 C,A	6,7						:	13 29%	1
Organizational CC Behavior/GEC 002L		3 C,A	6,7	13 45	29%					13 29% 45 100%	1
Behavior/GEC 002L	3 Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style. State			45	100%	15	50%	15		45 100%	1
Behavior/GEC 002L Indamental of Biochemistry - II/BMLT 116 L	Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style. PO1-PC					15	50%	15		13 29% 45 100% 60 100%	3
Behavior/GEC 002L undamental of Biochemistry - II/BMLT 116 L	3 Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style. State			45	100% 67%	15			50% 6	45 100% 60 100%	3
Behavior/GEC 002L undamental of Biochemistry - II/BMLT 116 L	Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style. PO1-PC			45	100% 67%				50% 6	45 100% 60 100%	3
Behavior/GEC 002L undamental of Biochemistry - II/BMLT 116 L	Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style. PO1-PC	S C,A,P	1,2,3,4	45	100% 67%				50% 6	45 100% 60 100%	3
Behavior/GEC 002L undamental of Biochemistry - II/BMLT 116 L CC Fundamentals of	Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style. PO1-PC At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory	S C,A,P	1,2,3,4	45 30 30	100% 67%	15	50%	15	50% 6	45 100% 60 100% 60 100%	3
Behavior/GEC 002L undamental of Biochemistry - II/BMLT 116 L CC Fundamentals of dicrobiology-II/BMLT 117 L CC	Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style. PO1-PO1 At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory PO1-PO1 This part is designed to study the details of systemic bacteriology including its morphology, species, lab diagnosis, isolation and identification. PO1-PO2 PO1-PO3 PO3 PO3 PO3 PO3 PO3 PO3 PO3	3 C,A,P	1,2,3,4 1 to 14	45 30 30	100% 67%	15	50%	15	50% 6 50% 6	45 100% 60 100% 60 100%	3 3
Behavior/GEC 002L undamental of Biochemistry - II/BMLT 116 L CC Fundamentals of dicrobiology-II/BMLT 117 L CC	Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style. POI-POI At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory This part is designed to study the details of systemic bacteriology including its morphology, species, lab diagnosis, isolation and identification.	3 C,A,P	1,2,3,4 1 to 14	45 30 30 25	100% 67% 67%	7	50%	7 8	50% 6 50% 6 23% 5 50%	45 100% 60 100% 60 100% 39 52%	3
Behavior/GEC 002L undamental of Biochemistry - II/BMLT 116 L CC Fundamentals of Wicrobiology-II/BMLT 117 L CC	Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style. PO1-PO1 At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory PO1-PO1 This part is designed to study the details of systemic bacteriology including its morphology, species, lab diagnosis, isolation and identification. PO1-PO2 PO1-PO3 PO3 PO3 PO3 PO3 PO3 PO3 PO3	3 C,A,P	1,2,3,4 1 to 14	30 30 25 20	100% 67% 67% 56%	7 8	23%	7 8	50% 6 50% 6 23% 2 27% 3 50% 7	45 100% 60 100% 60 100% 39 52%	3 3
Behavior/GEC 002L undamental of Biochemistry - II/BMLT 116 L CC Fundamentals of Microbiology-II/BMLT 117 L CC	Suplain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style. POI-POI At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory This part is designed to study the details of systemic bacteriology including its morphology, species, lab diagnosis, isolation and identification. POI-POI At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory FOI-POI At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory FOI-POI At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory FOI-POI At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory FOI-POI At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory FOI-POI At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory FOI-POI At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory FOI-POI At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory FOI-POI At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory FOI-POI At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory FOI-POI At the e	3 C,A,P	1,2,3,4 1 to 14 1 to 14	45 30 30 25 20 45 34	100% 67% 67% 56% 44% 100%	15 7 8 15 7.5	23% 27% 50% 25%	7 8 15	50% 6 50% 6 23% 3 27% 3 50% 7	45 100% 60 100% 60 100% 39 52% 36 48% 75 100% 49 65%	
Behavior/GEC 002L undamental of Biochemistry - II/BMLT 116 L CC Fundamentals of Microbiology-II/BMLT 117 L CC CC	Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style. POL-POL-POL-POL-POL-POL-POL-POL-POL-POL-	3 C,A,P	1,2,3,4 1 to 14 1 to 14	45 30 30 25 20 45	100% 67% 67% 56%	7 8 8 15	23% 27% 50%	7 8 15	50% 6 50% 6 23% 3 27% 3 50% 7	45 100% 60 100% 60 100% 39 52% 36 48% 75 100%	
Behavior/GEC 002L undamental of Biochemistry - II/BMLT 116 L CC Fundamentals of Microbiology-II/BMLT 117 L CC CC	Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style. POL-POL-POL-POL-POL-POL-POL-POL-POL-POL-	3 C,A,P 3 C,A,P 3 C,A,P	1,2,3,4 1 to 14 1 to 14	45 30 30 25 20 45 34	100% 67% 67% 56% 44% 100%	15 7 8 15 7.5	23% 27% 50% 25%	7 8 8 15 7.5	50% 6 50% 6 23% 5 27% 5 50% 2 17% 1	45 100% 60 100% 60 100% 39 52% 36 48% 75 100% 49 65%	3
Behavior/GEC 002L Indamental of Biochemistry - II/BMLT 116 L CC Fundamentals of flicrobiology-II/BMLT 117 L CC CC CC Hematology and Clinical	Splain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style. P01-P0 At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory This part is designed to study the details of systemic bacteriology including its morphology, species, lab diagnosis, isolation and identification. P01-P0 This part is designed to study the details of systemic bacteriology including its morphology, species, lab diagnosis, isolation and identification. P01-P0 This part is designed to study the details of systemic bacteriology including its morphology, species, lab diagnosis, isolation and identification. P01-P0 Students will have knowledge about various glassware, equipments. P01-P0 Students will be able to prepare percent, normal, molar solutions	3 C,A,P 3 C,A,P 3 C,A,P	1,2,3,4 1 to 14 1 to 14	45 30 30 25 20 45 34	100% 67% 67% 56% 44% 100% 76%	15 7 8 15 7.5	50% 23% 27% 50% 25%	15 7 8 15 7.5 5	50% 6 50% 6 23% 2 27% 3 27% 3 17% 1 8%	45 100% 60 100% 60 100% 39 52% 36 48% 75 100% 49 65% 18 24%	3
Behavior/GEC 002L Indamental of Biochemistry - II/BMLT 116 L CC Fundamentals of licrobiology-II/BMLT 117 L CC CC CC Hematology and Clinical	Epplain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style. P01-P01 At the end of semester students shall be able to get knowledge about quality Management System in Clinical biochemistry Laboratory At this part is designed to study the details of systemic bacteriology including its morphology, species, lab diagnosis, isolation and identification. P01-P01 This part is designed to study the details of systemic bacteriology including its morphology, species, lab diagnosis, isolation and identification. P01-P01 This part is designed to study the details of systemic bacteriology including its morphology, species, lab diagnosis, isolation and identification. P01-P01 Sudents will have knowledge about various glassware, equipments. P01-P01 Sudents will have knowledge about various glassware, equipments. P01-P01 Analytical skill for examination of body fluids, blood pit and electrolytes.	3 C,A,P 3 C,A,P 3 C,A,P 3 C,A,P	1,2,3,4 1 to 14 1 to 14 1,2,3,4,6 1	45 30 30 25 20 45 34 8	100% 67% 67% 56% 100% 76% 18%	15 7 8 15 7.5 5	50% 23% 27% 50% 25% 17%	15 7 8 15 7.5 5	50% 6 50% 6 23% 3 27% 3 27% 4 17% 1 8% 50% 7	45 100% 60 100% 60 100% 39 52% 36 48% 75 100% 49 65% 18 24%	3

Applications/AEC 003 L	P01-P0	C,A	6,7,8	15	33%				15 339	% 2
<u> cc</u>	Explain the function of Hospital Information Systems Analyze medical standards PO1-PO		9,10,11,12		31%				14 319	
				45	100%				45 100	%
	P01-P0	C,A	1,2,3	15	33%				15 339	% 2
<u> CC</u>	To understand the importance & Methodology for research								+	
Biostatistics and Research										
Methodology/AEC 004 L	POI-PO	C,A	4,5,6,7,8,9	30	67%				30 679	% 3
	To learn in detail about sampling, probability and sampling distribution, significance tests correlation and regression, sample size determination, study design and multivariate analysis.			45	100%				45 100	1%
			42245	20	670/	45	500/	45 500/	50 400	201
	P01-P0	C,A,P	1,2,3,4,5	30	67%	15	50%	15 50%	60 100	% 3
Clinical Biochemistry - CC	At the end of semester students shall be able to develop technical Skills to perform various diagnostic profiles to operate Lab Information System & to report independently									
I/BMLT 120 L				30	67%	15	50%	15 50%	60 100	f%
	P01-P0	C,A,P	1 to 12	15	33%	5	17%	5 17%	25 339	% 2
		C, 1,1	1.012	13	3370		1770	3 1770	25 337	
cc	Theory and Lab courses provide the student with an introduction to basiclaboratory identification and classification of medically significant isolates in mycology, parasitology.									
Medical Microbiology-										
I/BMLT 121 L	PO1-PO	C,A,P	1 to 12	15	33%	5	17%	5 17%	25 339	% 2
cc	Laboratory safety, specimen selection and processing, isolation methods, immunologic diagnosis and treatment.									
	POI-PO	C,A,P	1 to 12	15	33%	5	17%	5 17%	25 339	% 2
CC	Epidemiology and pathogenesis of mycosis, parasitic and infections are explored			45	100%	15	50%	15 50%	75 100	J%
	PO1-PO	C,A,P	1,2,3,4	15	33%	5	17%	5 17%	25 339	% 2
CC	The student should be able to apply the basic knowledge of hematology, histopathology, and cytology in laboratory									
	The determination of the control of									
Blood Bank and General	PO1-PO	C,A,P	1,2,3,4	15	33%	5	17%	5 17%	25 339	% 2
Pathology - I/BMLT 122L CC	The student should perform the techniques and staining procedure in histopathology and cytology								++-	
	PO1-PO	C,A,P	1,2,3,4	15	33%	5	17%	5 17%	25 339	% 2
l co	The student should be able to apply the basics of hematology and clinical pathology learnt in 3rd and 4th semester in clinical laboratory.									
				45	100%	15	50%	15 50%	75 100	96
	P01-P0	C,A	1,2,3,4,6	40	89%				40 899	6 3
Basics of Clinical Skill Learning/CEC 005 L										
cc	After successful accomplishment of the course, the students would be able to Measure Vital Signs, do basic physical Examination of the patients, NG tube basics, Administration of Medicines								++-	+
	P01-P0	C,A	5	5	11%				5 119	% 1
cc	The students will learn about Asepsis, and the Cleanliness related to asepsis and on mobility of the patients									
				45	100%				45 100	<u>%</u>
	POI-PO	C,A	1,2	15	33%				15 339	% 2
cc	Understand and apply resource management concepts (personnel, finance, and material resources) and the processes and strategies needed in specific hospital sectors								$\perp \perp$	
W 210 C	PO1-PO	C,A	4	10	22%				10 229	% 1
Hospital Operation Management/CEC 006 L	Communicate effectively and develop their leadership and teambuilding abilities	+							+	
	P01-P0	C,A	3	10	22%				10 229	% 1
cc	Apply modern change management and innovation management concepts to optimize structures		1							
									\top	
	PO1-PO	C,A	5	10	22%				10 229	% 1
cc	Analyze existing hospital service policies and enhance their alignment within the local and national context			45	100%				45 100	0%
					220,0				1 250	
	P01-P0		1,2,3,4,5	30	100%	15	25%	15 25%	60 100	<i>%</i> 3
	l I		1	1	I	1 1	1	1	1 1	1
	At the end of semester students shall be able to Work as a Laboratory Technician in Hospital Laboratories, Pharmaceutical industries & in Research institute			30.	100%	15.	25%	15 25%	60 100	%
			4-	30	100%	15		15 25%		186
II/BMLT 124 L			1,2	30 8	100%	15 5	25% 17%	15 25% 5 17%		0% % 1

Semester 6	Medical Microbiology- II/BMLT 125L		PO1-PO8 Theoretical as well as practical training is imparted to the students in various branches of Microbiology namely Bacteriology, Virology, Parasitology, Immunology, serology and Mycology so that they can participate in good patient care and prevention of infectious diseases in the community.	3 TO 11	30	67%	5	17%	5	17% 4	40 53%	3
		CO3	PO1-PO8 They are introduced to basic and advanced methods used in the field of diagnostic Microbiology	8,9	7	16%	5	17%	5	17% 1	17 23%	1
		Total			45	100%	15	50%	15	50% 7	75 100%	
		CO1	PO1-PO8 The student be well versed with the techniques in blood banking like components and FDA regulations	1	18	40%	7	23%	7	23% 3	32 43%	2
	Blood Bank and General Pathology - II/BMLT 126		PO1-PO8 The B.Sc graduate should have sound knowledge and basic skills of working in a pathology lab and blood bank	2,3	27	60%	8	27%	8	27% 3		3
	L	Total			45	100%	30	100%	30	100% 7	75 100%	

CO PO MAPPING (Matrix)
Programe - B. Optometry
Semester - Smester III, IV, V & VI

			Programe - B. Optometry									
nos verestados a cu	H. Parada and A. A. Warana and J. Charles and A. Ch	en incomplete of Boronda	Semester - Smester III, IV, V & VI									
	Il Development- An ability to apply knowledge of healthcare technology (including clinical subject — To apply professional judgment and rational thinking in decision-making	is, investigations/ Procedi	res, maning fractioners)									+
	Correlation of professional knowledge applied to current clinical or healthcare practices.											1
	s – To adopt and apply code of ethics prescribed by professional bodies in professional and social cont skills – To communicate effectively with the patients, care givers and other healthcare professional for											+
PO6 - Individual / Tear	n work - ability to function on multi-disciplinary teams											
	ment: Development of intellectual mental, Physical, Emotional & Social abilities, so as to be capable s- To develop continuous learning attitude in context of research, advances in clinical practices and to it											+
	B		PO Mapping same with correlation level 3,2,1 The notation of 1 - low, 2 - moderate, 3 - high									
				Knowledge &				Communi		Holistic		
				Skill	Thinking		Professional ethics	cation	Individual / Team work	developme	Lifelong learning	
				Development	Tilliking	sorving	cenics	skills	ream work	nt	icai iiiig	Averag
		Course										1
Semester	Course / Course Code	Outecome	Details	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	
			To understand about fundamentals of light, properties and various phenomena of light									
	Physical Optics BOPTOM 112 L	COI		3	2	2	1	1	1	3	3	2.0
		Total		3	2	2	1	1	1	3	3	2.0
		COI	To equip the students with a thorough knowledge of mirrors and lenses	3	2	3	1	1	1	3	3	2.1
	Geometrical Optics BOPTOM 113 L		To be able to predict the basic properties of the images formed by various optical instruments.							\perp		
	decinement opines Bot 15.11.115 E	CO2	To the after to preduct the waste properties of the images notined by various optical institutions.	3	3	3	1	1	1	3	3	2.3
		Total		3	2.5	3	1	1	1	3	3	1.5
			To understand the fundamentals of optical components of the eye, and to predict the retinal image formed by optical system of the eye.						-		-	1
		COI		3	3	2	1	1	1	3	3	2.1
						-						
	VI. 10 / VII POPTOVI III		Ability to manage refractive errors with understanding of visual acuity, measurement techniques of optical constants of eye, objective and subjective refraction.		-							-
	Visual Optics I/II BOPTOM 114 L		young to manage centere cross with uncerstanding or issua accury, measurement consumer of cyc, opecite and subjected relations.									
		CO2		3	3	3	3	3	3	3	3	3.0
		Total		3	3	2.5	2	2	2	3	3	2.6
			To understand and apply knowledge about the Etiology, Epidemiology, clinical picture of ocular diseases, Diagnostic approach and									
			Management of the anterior segment ocular diseases									
	Ocular Diseases I BOPTOM 115 L	COl		3	3	3	3	3	3	3	3	3.0
		Total		3	3	1	2	3	2	3	2	2.8
			To know the purpose, and ability to set up devices required for dignostic tests, understand indications and contraindications of the test, perform step-by-step procedures, document and interpret the findings of the various clinical optometry procedures				_		_			
		501		3	3	3	3	3	3		3	3.0
	Clinical Examinations and Visual Systems BOPTOM 116 L	COI		,	3	,	3	3	3	3	3	3.0
		Total	Students will become self dependent, more decisive and develop intuitive ability for their study and career related matter.	3	3	2	3	3	1	2	3	1.8
		COl		2								0.3
Semester 3												
		502	Development of the ability to present their ideas in professional manner	2								0.3
		CO2										0.5
		CO3	Enhance communication skills, public speaking & improved Presentation ability	2								0.3
		COS										0.5
			Students will be able to explore their inner potential and inner ability to become a successful researcher or professional & hence become more focused.									
	Pursuit of Inner Self Excellence (POIS)	CO4		2								0.3
	Fulsuit of finier Seif Excenence (FOIS)											
			Ability to observe and manage stress levels while performing their professional duties							\vdash		1
		CO5		2								0.3
			Development of personal attributes like Empathy, Compassion, Service, Love & brotherhood, ability to serve the society and industry in better way with teamwork and thus grow professionally							+		+
		CO6		2								0.3
		Total	Describe and apply motivation theories to team and organizational scenarios in order achieve a team's or an organization's goals and objectives	2								0.3
		COI		2			3	2	3			1.3
			Explain the effect of personality, attitudes, perceptions and attributions on their own and other's behaviours in team and organizational settings									+
			. , , , , , , , , , , , , , , , , , , ,							1		
	Organizational Behavior GEC 002 L	CO2		1			3	1	3			1.0
	· · · · · · · · · · · · · · · · · · ·									<u> </u>		
			Explain types of teams and apply leadership theories and better understand their own leadership style. Analyse and apply leadership theories and better understand their own leadership style.									
										1		
		CO3		1			3	1	3	1		1.0
										1		
		Total		1.3			3.0	1.3	3			1.1

		To understand the theory of spectacle lenses, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe		\top							
		сот	3	2	3	1	1	1	3	3	2.1
	Optometrie Optics I & II BOPTOM 117 L	Demontsrat and apply the knowledge of construction, design application and development of lenses . particularly of the methods of calculating their power and effect selection of lenses , dispensing, troubleshooting and complaint handling	3	3	3	3	3	3	3	3	3.0
		Total To understand and apply knowledge about the Etiology, Epidemiology, clinical picture of ocular diseases, Diagnostic approach and Management of the posterior segment ocular diseases and glaucoma.	3	2.5	3	2	2	2	3	3	2.6
	Ocular Diseases II & Glaucoma BOPTOM 118 L	Total To understand the theory behind spectacle frames, their materials,manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe	3	3	3	3	3	3	3	3	3.0
		CO1	3	3	3	1	1	3	3	3	2.5
Semester 4	Dispensing Optics BOPTOM 119 L	To understand and apply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle. CO2	3	3	3	1	3	1	3	3	2.5
		Ability to dispense sepetacles with appropriate instructions, perform troubleshooting and resolve complaints of the patients CO3 Total To gain theoretical knowledge and basic practical skill in handling instruments used in optometry/ ophthalmogy clincal practises	3	3	3	3 1.7	2.0	2.3	3	3	2.9
	Optometric Instrumentation BOPTOM 120 L	Total To understand the drug compositions, actions, uses, adverse effects and mode of administration of drugs, especially related to eyes.	3	3	3	3	3	3	3	3	3.0
	Basic &Occular Pharmacology BOPTOM 121 L	Total Discuss about health informatics and different IT applications in allied health care.	3	3	2	1	1	1	3	3	2.1
	Computer and analization AEC 003 I	CO1 Explain the function of Hospital Information Systems CO2 Understand medical standards Total	3 3	1 1	1 1	1 1	3 3	2 2	1	1 1	1.6 1.5 1.7
	Computer and applications AEC 003 L Biostatistics and Research Methodology AEC 004 L	To understand the importance, study designs & Methodology of research CO1 To learn in detail about sampling, probability and sampling distribution, significance tests correlation and regression and multivariate analysis. CO2 Total	3	1	1	1	1	2	2	3	1.8
	Contact Lenses I BOPTOM 123 L	CO1 A detailed knowledge of lens design, materials, and manufacture for RGP including verification CO3 An ability to fit and assess a range of RGP Lenses for Sperical, regular and irregular astigmatsism toric and Prebyopia correction CO4 Ability to finalise the CL design for various ocular conditions and patient demands, recommending care and maintanace schedule CO5 Identify and manage the adverse effects of contact lens Total	3 3 3 3 3 3	3 3 3 3 3 3	3 3 3	1 3 3	1 3 3 3 2.5	1 3 3 3 2.5	3 3 3 3 3	3 3 3 3 3 3	1.8 2.3 3.0 3.0 3.0 2.8
	Binocular Vision I & II BOPTOM 124 L	CO1 To gain knowledge of the gross anatomy and physiology relating to the extraocular muscles CO2 Provide a detailed explanation of, and differentiate between the etiology, investigation and management of binocular vision anomalies CO3 Adapt skills and interpret clinical results following investigation of binocular vision anomalies appropriately and safely To understand the role of an optometrists for co management of an starbismic anomalies with ophthalmologist Total CO3 Understanding definition epidemiology and terminology of Low Vision	3 3 3 3 3	1 1 3 3 2 1	1 1 3 3 2 1	1 1 2 3 1.8	1 1 3 3 2 1	1 1 3 3 2 1	3 3 3 3 3 3	3 3 3 3 3 3	1.8 1.8 2.9 3.0 2.3 1.8
Semester 5	Low Vision Aids BOPTOM 125 L	CO2 Ability to do assessment of low vision patients and determine appropriate management plan for them. CO3 Ability to determine magnification requirements and to prescribe, dispense electronic and optical low vision task appropriate devices. CO4 Ability to select and prescribe suitable functional adaptive devices for LV patients CO5 Ability to establish effective communication with individuals, their family, careers and with other organizations and professionals for effective management of Lypatient Total CO6 To have an understanding of various systemic diseases that all affect the eyes	3 3 3 3 3 3	3 3 3 3 3	3 3 3 3 3	_	3 3 3 3 1	3 3 3 3 3	3 3 3 3 3 3	3 2 3 3 2.8 3	3.0 2.9 3.0 3.0 2.7 1.8
	Systemic Diseases BOPTOM 126 L	CO2 To have an understanding of the ocular side effects of various drugs that are used to manage or treat systemic diseases CO3 To understand the role of an optometrists for co management of an systemic diseases with other health care professionals Total CO1 After successful accomplishment of the course, the students would be able to Measure Vital Signs, do basic physical Examination of the patients, NG tube basics, Administration of Medicines	3 3 3	1 3 2			1 3 2 3	1 3 2 2	3 3 3	3 3 3	1.8 3.0 2.2 1.9
	Basics of Clinical Skill Learning CEC 005 L	CO2 The students will learn about Asepsis, and the Cleanliness related to asepsis and on mobility of the patients Total CO3 Understand and apply resource management concepts (personnel, finance, and material resources) and the processes and strategies needed in specific hospital sectors	3 3 3	1 1 1	1 1	2 2 1	3 3 3	2 2 2	2 2 2	1 1 3	1.9 1.9 2.0
	Hospital Operation Management CEC 006 L	CO2 Communicate effectively and develop their leadership and teambuilding abilities CO3 Appl modern change management and innovation management concepts to optimize structures CO4 Analyze existing hospital service policies and enhance their alignment within the local and national context	1 1 1 1 2	1 1 1 1 2	1	3 3 3	3 3 3	3 3 3	1 1 1 2	1 1 1	1.8 1.8 1.8
	Contact Lenses II BOPTOM 128 L	CO1 A detailed knowledge of lens design, materials, and manufacture for Soft contact lenses including verification CO2 An ability to fit and assess a range of SCL Lenses for Sperical, astignatism and Prebyopia correction CO3 Ability to finalise the CL design for various coular conditions and patient demands, recommending care and maintanace schedule CO4 Identify and manage the adverse effects of contact lens Total CO3 To understand visual demands for various kinds of sports for athletes	3 3 3 3 3	3 3 3 3 3	2 3 3 3 2.8	3 3 2.5	1 3 3 3 2.5	1 3 3 3 2.5	3 3 3 3 3	3 3 3 3 3	2.1 3.0 3.0 3.0 2.8 1.8
Semester 6	Sports Vision BOPTOM 129 L	CO2 To perform a comprehensive sports vision assessment for athletes CO3 To be able prescribe vision correction appropriate to address the visual demands for sport activity CO4 To be able to prescribe vision training and protective devices to minimize ocular trauma due to sports. Total CO1 To gain knowledge on common ocular diseases in pediatric and geriatric age group.	3 3 3 3 3 3 3	3 3 3 3	3 3 3 3	1 3 3 3	2 3 3 3	1 3 3 3	3 3 3 3 3	3 3 3 3 3	2.4 3.0 3.0 2.5 1.8
	Pediatric and Geriatric Optometry BOPTOM 130 L	CO2 Be able to identify, investigate the age related changes' developmental and congenital anomalies in the eyes. CO3 Communicate and counsel effectively with the pediatric and geriatric patients and their attendees. CO4 To dispense appropriate optical correction in the form of Spectacle! Contact lenses! LVA with proper instructions. CO5 Communicate professionally with other health care professionals in terms of accurate presentation of patients' symptoms, critical analysis of clinical findings and suitable plan of action	3 3 3 3	3 3 3 3	3 3 3 3	3 3 3	2 2 3 3	3 3 3	3 3 3 3	3 3 3 3	2.4 2.9 3.0 3.0

	CO6	Recognize the professional responsibility and need of life-long learning in geriatric and pediatric eye care.	3	3	2	3	2	2	3	3	2.6
	Total		3	3	2	3	2	2	3	3	2
	CO1	To gain and demonstrate the knowledge of visual requirements of jobs* To be able to apply different types of protocols for doing a right clinical history according to the patient profile and its context (workplace, free activities, etc).	3	1	1	1	1	1	3	3	
	CO2	To be able to know the functional limits of human vision and its relationship with age, as well as at occupational contexts and free activities, linking with the task visibility factors	3	1	1	1	1	1	3	3	
	CO3	To acquire ability for examining, give diagnosis, and manage visual anomalies, with special relevance in the differential diagnosis related with occupational and free activity contexts	3	3	3	3	3	3	3	3	1 3
	CO4	To be able to evaluate eye hazards in occupational or free-time activities under radiant energy exposures, as well as continuous light sources such as laser, and understand their controls for avoiding eye injuries	3	3	3	3	2	2	3	3	
Occupational Optometry BOPTOM 131 L	CO5	To be able to identify and analyze environmental and occupational hazards causing eye injuries (mechanic, chemical, electric, etc).	3	3	2	2	3	2	3	3	1 :
	CO6	To acquire ability for evaluating the visual performance of any patient and propose appropriate optical prescription, environment design, visual therapy, etc	3	3	3	3	3	2	3	3	1 2
	CO7	To be able to communicate and inform to patient about diagnostic tests, him/her clearly explaining the interpretation and their consequences of their diagnosis.	3	3	3	2	3	2	3	3	
	CO8	To gain knowledge of the international and national standards related to visual and eye health in variety of occupations	3	3	1	1	2	1	3	3	
	Total		3	3	1	1	2	1	3	3	

			MAPPING AVERAGE							
Semester	Subject	PO1	P02	PO3	PO4	PO5	PO6	PO7	PO8	Average
	Physical Optics BOPTOM 112 L	3	2	2	1	1	1	3	3	2
	Geometrical Optics BOPTOM 113 L	3	3	3	1	1	1	3	3	2
	Visual Optics I/II BOPTOM 114 L	3	3	3	2	2	2	3	3	3
Semester 3	Ocular Diseases I BOPTOM 115 L	3	3	1	2	3	2	3	2	3
	Clinical Examinations and Visual Systems BOPTOM 116 L	3	3	2	3	3	1	2	3	2
	Pursuit of Inner Self Excellence (POIS)	2	2	2	2	2	2	2	2	2
		2	2	2		2	2	2		
	Organizational Behavior GEC 002 L	2		2	2	2	2	2	2	2
	Optometric Optics I & II BOPTOM 117 L	3	3	3	2	2	2	3	3	3
	Ocular Diseases II & Glaucoma BOPTOM 118 L	3	3	3	3	3	3	3	3	3
	Dispensing Optics BOPTOM 119 L	3	3	3	2	2	2	3	3	3
Semester 4	Optometric Instrumentation BOPTOM 120 L	3	3	3	3	3	3	3	3	3
	Basic &Occular Pharmacology BOPTOM 121 L	3	3	2	,		1	3	- 3	2
	Basic &Occular Pharmacology BOP TOW 121 L	3		2	1	1	1	3		
	Computer and applications AEC 003 L	3		1	1	3	1	1	1	2
	Biostatistics and Research Methodology AEC 004 L	3	1	1	1	1	2	2	3	2
	Contact Lenses I BOPTOM 123 L	3	3	3	3	3	3	3	3	3
	Binocular Vision I & II BOPTOM 124 L	3	2	2	2	2	2	3	3	2
	Low Vision Aids BOPTOM 125 L	3	3	3	3	3	3	3	3	3
Semester 5	Systemic Diseases BOPTOM 126 L	3	2	2	,	,	2	3	- 2	2
	Basics of Clinical Skill Learning CEC 005 L	3	I	1	2	3	2	2		2
	Hospital Operation Management CEC 006 L	1	1	1	3	3	3	1	1	2
	Contact Lenses II BOPTOM 128 L		3		3	3	3	-		
	Sports Vision BOPTOM 129 L	3	3	3	3	3	3	3	3	3
Semester 6	Pediatric and Geriatric Optometry BOPTOM 130 L	,	3							
	and Genatic Optometry BOT 1000 150 E	3	3	2	3	2	2	3	3	3
	Occupational Optometry BOPTOM 131 L	3		1	1	2	1	3	3	2

			CO & PO Relationships (Mapping Strength) Programe - B. Optometry											
			Senester - Smester III, IV, V & VI											
	Course & Course code	co		CO & PO Relationships	Domain C.A.P	Unit	Lect	ure	Lal	b	Clinic		Total	Strength Level of CO addressing to PO Level 3:>50%, Level 2: 30%-50%, Level 1:< 30%, Not addressed :<5%
Semester	Course & Course code	CO	CO Detail	100000	C.A.P	No	Hrs	%	Hrs	%	Hrs	% Hr	rs %	
	Physical Optics BOPTOM 112 L	CO1	To understand about fundamentals of light, properties and various phenomena of light	PO1,PO2 ,PO3,PO7,PO8	С	1'-5	45	100	60	100			105 100	3
		COI	To equip the students with a thorough knowledge of mirrors and lenses	PO1,PO2 ,PO3,PO7,PO8	С	1'- 5	29	100 64	30	50	0	0	59 56	3
	Geometrical Optics BOPTOM 113 L	CO2	To be able to predict the basic properties of the images formed by various optical instruments.	PO1-PO8	CAP	7'-12	16	36	30	50	0		46 44	2
							45	100		100	0	0	45 100	
		COI	To understand the fundamentals of optical components of the eye, and to predict the retinal image formed by optical system of the eye.	PO1,PO2 ,PO3,PO7,PO8	с	1'-2	33	73	30	50	0	0	63 53	3
	Visual Optics I/II BOPTOM 114 L	CO2	Ability to manage refractive errors with understanding of visual acuity, measurement techniques of optical constants of eye, objective and subjective refraction.	PO1-PO8	CAP	3'-4	27	60	30	50	0		57 48	2
							60	100	60	100	0	0 :	120 100	
	Ocular Diseases I BOPTOM 115 L	COl	To understand and apply knowledge about the Etiology, Epidemiology, clinical picture of ocular diseases, Diagnostic approach and Management of the anterior segment ocular diseases	PO1-PO8	CAP	1'-6	60	100	0	0			60 100	
							60	100		100		0	60 100	
	Clinical Examinations and Visual Systems BOPTOM 116 L	COI	To know the purpose, and ability to set up devices required for dignostic tests, understand indications and contraindications of the test, perform step-by-step procedures, document and interpret the findings of the various clinical optometry procedures	PO1-PO8	CAP	1'-4	45	100	30	50	30		105 100	
							45	100		50		50	105 100	
Semester 3		COI	Students will become self dependent, more decisive and develop intuitive ability for their study and career related matter.	PO1-PO8	C,A	1,2	8	18%					8 18%	1

		CO2	PO1-PO8	C,A	2,4	7	16%				7	16%	1
		Development of the ability to present their ideas in professional manner	+										
		CO3 Enhance communication skills, public speaking & improved Presentation ability	PO1-PO8	C,A	1	5	11%				5	11%	1
		Eminace communication skins, paone speaking & improved resonation aomity											
	Pursuit of Inner Self Excellence (POIS)	CO4	PO1-PO8	C,A	1,3	15	33%				15	33%	2
	,	Students will be able to explore their inner potential and inner ability to become a successful researcher or professional & hence become more focused.											
		COS	PO1-PO8	C,A	1	5	11%				5	11%	1
		Ability to observe and manage stress levels while performing their professional duties											
		C06	PO1-PO8	C,A	4	5	11%				5	11%	1
		Development of personal attributes like Empathy, Compassion, Service, Love & brotherhood, ability to serve the society and industry in better way with teamwork and thus grow professionally				45	100%				45	100%	
		COI	PO1-PO8	C,A	1,3,4	18	40%				18	40%	2
		Describe and apply motivation theories to team and organizational scenarios in order achieve a team's or an organization's goals and objectives											
		CO2	PO1-PO8	C,A	2,5	14	31%				14	31%	2
	Organizational Behavior GEC 002 L	Explain the effect of personality, attitudes, perceptions and attributions on their own and other's behaviours in team and organizational settings											
		The state of the s											
		CO3	PO1-PO8	C,A	6,7	13	29%				12	29%	1
			F01-P08	c,A	0,/	1.5	2370				13	2370	1
		Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style.											
						45	100%				45	100%	
		соі	PO1,PO2 ,PO3,PO7,PO8	С	1'- 12	29	48	45	50		0 74	49	2
	Optometric Optics I & II BOPTOM 117 L	To understand the theory of spectacle lenses, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe											
		CO2	PO1-PO8	CAP	13'-19	31	52	45	50		0 76	51	3
		Demontsrat and apply the knowledge of construction, design application and development of lenses. particularly of the methods of calculating their power and effect selection of lenses, dispensing, troubleshooting and complaint handling											
						60	100		100		0 60	100	
	Ocular Diseases II & Glaucoma BOPTOM 118 L	COI To understand and apply knowledge about the Etiology, Epidemiology, clinical picture of ocular diseases, Diagnostic approach and	PO1-PO8	CAP	1'-5								
	Octifal Diseases II & Giauconia BOT TOW 118 E			CAP	1 -5	45	100		0		0 45	100	3
		, Management of the posterior segment ocular diseases and glaucoma.		CAP	1-5	45	100		0		0 45	100	3
1		.Management of the posterior segment ocular diseases and glaucoma.		CAP	1-5								3
		.Management of the posterior segment ocular diseases and glaucoma.		CAP	1-5	45 45			0		0 45		3
		"Management of the posterior segment ocular diseases and giaucoma.				45	100		0		0 45	100	
		Management of the posterior segment ocular diseases and glaucoma. CO1	PO1,PO2 ,PO3,PO7,PO8	С	1-5			5			0 45		1
		COI	PO1,PO2			45	100		0		0 45	100	
	Division of page 1	"Management of the posterior segment ocular diseases and giaucoma.	PO1,PO2			45	100		0		0 45	100	
Semester 4	Dispensing Optics BOPTOM 119 L	COI	PO1,PO2			45	100		0	5	6 15	100	
Semester 4	Dispensing Optics BOPTOM 119 L	CO1 To understand the theory behind spectacle frames, their materials,manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe CO2	PO1,PO2 ,PO3,PO7,PO8	c	1	45 5	100	5	6	5	6 15	110	1
Semester 4	Dispensing Optics BOPTOM 119 L	CO1 To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe CO2 To understand and apply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle.	PO1,PO2 ,PO3,PO7,PO8	C	2'-5	45 5	11 33	5	6 39	5	6 15	11 63	1
Semester 4	Dispensing Optics BOPTOM 119 L	CO1 To understand the theory behind spectacle frames, their materials,manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe CO2	PO1,PO2 ,PO3,PO7,PO8	c	1	45 5	100	5	6	5	6 15	110	1
Semester 4	Dispensing Optics BOPTOM 119 L	CO1 To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe CO2 To understand and apply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle.	PO1,PO2 ,PO3,PO7,PO8	C	2'-5	45 5 15	1100 111 11 33	35	6 39	5 35 5	0 45 6 15 39 85 6 35	11 63	3
Semester 4	Dispensing Optics BOPTOM 119 L	CO1 To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe CO2 To understand and apply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle. CO3 Ability to dispense sepctacles with appropriate instructions, perform troubleshooting and resolve complaints of the patients	P01,P02 ,P03,P07,P08 P01-P08	C CAP	2'-5	5 5 15 25 45	100 11 33 56	5 35 5 45	6 39 6	5 35 5 45	0 45 6 15 39 85 6 35 50 135	1100 11 63 26	3
Semester 4	Dispensing Optics BOPTOM 119 L Optometric Instrumentation BOPTOM 120 L	To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe CO2 To understand and apply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle. CO3 Ability to dispense sepetacles with appropriate instructions, perform troubleshooting and resolve complaints of the patients	PO1,PO2 ,PO3,PO7,PO8	C	2'-5	45 5 15	1100 111 11 33	35	6 6	5 35 5 45	0 45 6 15 39 85 6 35 50 135	11 63	3
Semester 4		CO1 To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe CO2 To understand and apply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle. CO3 Ability to dispense sepctacles with appropriate instructions, perform troubleshooting and resolve complaints of the patients	P01,P02 ,P03,P07,P08 P01-P08	C CAP	2'-5	45 5 15 25 45	100 11 33 56 100	5 35 5 45	0 6 39 6 44	5 35 5 45	0 45 6 15 39 85 6 35 50 135 50 75	1100 111 63 26 100	3
Semester 4		To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand and apply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle. CO3 Ability to dispense sepetacles with appropriate instructions, perform troubleshooting and resolve complaints of the patients To gain theoretical knowledge and basic practical skill in handling instruments used in optometry/ ophthalmogy clincal practises	P01.P02 ,P03,P07,P08 P01.P08	C CAP	1 2'-5 6'-10 1'-11	45 5 15 25 45 45	100 111 33 56 100 100	5 35 5 45	6 39 6 44 50	5 35 5 45 15	0 45 6 15 39 85 6 35 50 135 50 75	100 11 63 26 100	3
Semester 4		To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe CO2 To understand and apply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle. CO3 Ability to dispense sepetacles with appropriate instructions, perform troubleshooting and resolve complaints of the patients	P01,P02 ,P03,P07,P08 P01-P08	C CAP	2'-5	45 5 15 25 45	100 11 33 56 100	5 35 5 45	0 6 39 6 44	5 35 5 45 15	0 45 6 15 39 85 6 35 50 135 50 75	1100 111 63 26 100	3
Semester 4	Optometric Instrumentation BOPTOM 120 L	To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand and apply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle. CO3 Ability to dispense sepetacles with appropriate instructions, perform troubleshooting and resolve complaints of the patients To gain theoretical knowledge and basic practical skill in handling instruments used in optometry/ ophthalmogy clincal practises	P01,P02 ,P03,P07,P08 P01-P08	C CAP	1 2'-5 6'-10 1'-11	45 5 15 25 45 45 30	100 111 33 56 100 100	5 35 5 45 15	6 39 6 44 50 50	5 35 5 45 15 15	0 45 6 15 39 85 6 35 50 135 50 75 0 30	100 11 63 26 100 100	1 3 2
Semester 4		COI To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe CO2 To understand and apply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle. CO3 Ability to dispense sepetacles with appropriate instructions, perform troubleshooting and resolve complaints of the patients COI To gain theoretical knowledge and basic practical skill in handling instruments used in optometry' ophthalmogy clinical practices COI To understand the drug compositions, actions, uses, adverse effects and mode of administration of drugs, especially related to eyes.	P01,P02 ,P03,P07,P08 P01-P08 P01-P08	C CAP CAP	1 2'-5 6'-10 1'-11	45 5 15 25 45 45 45 30	100 111 33 56 100 100	5 35 5 45 15	6 39 6 44 50	5 35 5 45 15 15	0 45 6 15 39 85 6 35 50 135 50 75 0 30 0 30	100	1 3 2 3
Semester 4	Optometric Instrumentation BOPTOM 120 L	To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand and apply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle. CO3 Ability to dispense sepetacles with appropriate instructions, perform troubleshooting and resolve complaints of the patients CO1 To gain theoretical knowledge and basic practical skill in handling instruments used in optometry/ ophthalmogy clinical practices	P01,P02 ,P03,P07,P08 P01-P08	C CAP	1 2'-5 6'-10 1'-11	45 5 15 25 45 45 30	100 111 33 56 100 100	5 35 5 45 15	6 39 6 44 50 50	5 35 5 45 15 15	0 45 6 15 39 85 6 35 50 135 50 75 0 30 0 30	100 11 63 26 100 100	1 3 2
Semester 4	Optometric Instrumentation BOPTOM 120 L	To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand and apply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle. CO3 Ability to dispense sepetacles with appropriate instructions, perform troubleshooting and resolve complaints of the patients CO4 To gain theoretical knowledge and basic practical skill in handling instruments used in optometry ophthalmogy clinical practices CO5 To understand the drug compositions, actions, uses, adverse effects and mode of administration of drugs, especially related to oyes.	PO1.PO2 ,PO3.PO7.PO8 PO1.PO8 PO1.PO8 PO1.PO8	C CAP CAP CAP CAP CAP CAP CAP CAP CAP CA	1 2'-5 6'-10 1'-11 1'-10 1,2,3,4,5 6,7,8	45 5 5 15 25 45 45 45 30 30 16 15	100 111 33 56 100 100 100 100 36%	5 35 5 45 15	6 39 6 44 50 50	5 35 5 45 15 15	0 45 6 15 39 85 6 35 50 135 50 75 0 30 0 30 16	100	1 3 2 3 3
Semester 4	Optometric Instrumentation BOPTOM 120 L Basic &Occular Pharmacology BOPTOM 121 L	To understand the theory behind spectacle frames, their materials manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand and apply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle. CO3 Ability to dispense septacles with appropriate instructions, perform troubleshooting and resolve complaints of the patients CO1 To gain theoretical knowledge and basic practical skill in handling instruments used in optometry/ ophthalmogy clinical practices CO1 To understand the drug compositions, actions, uses, adverse effects and mode of administration of drugs, especially related to eyes.	PO1.PO2 ,PO3,PO7.PO8 PO1-PO8 PO1-PO8	C CAP CAP CAP	1 2'-5 6'-10 1'-11 1'-10 1,2,3,4,5	45 5 15 25 45 45 30 30 16 15 14	100 111 33 56 100 100 100 100 36%	5 35 5 45 15	6 39 6 44 50 50	5 35 5 45 15 15	0 45 6 15 39 85 6 35 50 135 50 75 0 30 0 30 16 15	100	1 3 2 3
Semester 4	Optometric Instrumentation BOPTOM 120 L	To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand and apply the knowledge of construction, designs and types of spectack frames, selection of frames, measurements associated with dispensing of spectack. Ability to dispense sepetacles with appropriate instructions, perform troublehooting and resolve complaints of the patients To gain theoretical knowledge and basic practical skill in hundling instruments used in optometryl ophthalmogy clinical practices To understand the drug compositions, actions, uses, adverse effects and mode of administration of drugs, especially related to eyes. COI Discuss about health informatics and different IT applications in allied health care. CO2 Explain the function of Hospital Informatics Systems	P01,P02 ,P03,P07,P08 P01-P08 P01-P08 P01-P08 P01-P08 P01-P08	CAP CAP CAP CAP CAP	1 2'-5 6'-10 1'-11 1'-10 1,2,3,4,5 6,7,8 9,10,11,12	45 5 15 25 45 45 45 30 16 15 14 45	100 11 33 56 100 100 100 100 100 36% 33% 31% 100%	5 35 5 45 15	6 39 6 44 50 50	5 35 5 45 15 15	0 45 6 15 39 85 6 35 50 135 50 75 0 30 16 15	100	1 3 2 3 3
Semester 4	Optometric Instrumentation BOPTOM 120 L Basic &Occular Pharmacology BOPTOM 121 L	To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand and apply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle. CO3 Ability to dispense sepetacles with appropriate instructions, perform troubleshooting and resolve complaints of the patients CO4 To gain theoretical knowledge and basic practical skill in handling instruments used in optometry ophthalmogy clinical practices CO5 To understand the drug compositions, actions, uses, adverse effects and mode of administration of drugs, especially related to oyes.	PO1.PO2 ,PO3.PO7.PO8 PO1.PO8 PO1.PO8 PO1.PO8	C CAP CAP CAP CAP CAP CAP CAP CAP CAP CA	1 2'-5 6'-10 1'-11 1'-10 1,2,3,4,5 6,7,8	45 5 15 25 45 45 30 30 16 15 14	100 111 33 56 100 100 100 100 100 36% 33% 33%	5 35 5 45 15	6 39 6 44 50 50	5 35 5 45 15 15	0 45 6 15 39 85 6 35 50 135 50 75 0 30 16 15	100	1 3 2 3 3
Semester 4	Optometric Instrumentation BOPTOM 120 L Basic &Occular Pharmacology BOPTOM 121 L	To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand and upply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle. Ability to dispense septateles with appropriate instructions, perform touble-blooting and resolve complaints of the potents To gain theoretical knowledge and basic practical skill in handling instruments used in optomery/ uphthalmogy clinical practices To understand the drug compositions, actions, uses, advence effects and mode of administration of drugs, especially related to eyes. COI Discuss about health informatics and different IT applications in allied health care. Explain the function of Hospital Information Systems Understand medical standards COI To understand the importance, study designs & Methodology of research	PO1.PO2 ,PO3,PO7.PO8 PO1-PO8 PO1-PO8 PO1-PO8 PO1-PO8 PO1-PO8	CAP CAP CAP CAP CA CA CA	1 2'-5 6'-10 1'-11 1'-10 1,2,3,4,5 6,7,8 9,10,11,12 1,2,3	45 5 5 15 25 45 45 45 30 16 15 14 45 15 15	100	5 35 5 45 15	6 39 6 44 50 50	5 35 5 45 15 15	0 45 6 15 39 85 6 35 50 135 50 75 0 30 0 30 16 15 114 45	100	1 3 2 3 3 2 2 2 2
Semester 4	Optometric Instrumentation BOPTOM 120 L Basic &Occular Pharmacology BOPTOM 121 L Computer and applications AEC 003 L	To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand and apply the knowledge of construction, designs and types of spectacle frames, nections of frames, measurements associated with dispensing of spectacle. CO3 Ability to dispense sepetacles with appropriate instructions, perform troubleshooding and resolve complaints of the potients CO4 To pain theoretical knowledge and havir practical skill in handling instruments used in optometry aphthalmage clinical practices CO5 To understand the drug compositions, actions, uses, adverse effects and mode of administration of drugs, especially related to eyes. CO6 Discuss about health informatics and different IT applications in allied beaths case. CO7 Explain the function of Hospital Informatics is Systems. CO6 To understand the importance, study designs & Methodology of research	P01,P02 ,P03,P07,P08 P01-P08 P01-P08 P01-P08 P01-P08 P01-P08	CAP CAP CAP CAP CAP	1 2'-5 6'-10 1'-11 1'-10 1,2,3,4,5 6,7,8 9,10,11,12	45 5 15 25 45 45 45 30 16 15 14 45	100 11 33 56 100 100 100 100 100 36% 33% 31% 100%	5 35 5 45 15	6 39 6 44 50 50	5 35 5 45 15 15	0 45 6 15 39 85 6 35 50 135 50 75 0 30 0 30 16 15 114 45	100	1 3 2 3 3
Semester 4	Optometric Instrumentation BOPTOM 120 L Basic &Occular Pharmacology BOPTOM 121 L Computer and applications AEC 003 L	To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand the theory behind spectacle frames, their materials, manufacturing process, types, advantages and disadvantages, calculations involved, when and how to prescribe To understand and upply the knowledge of construction, designs and types of spectacle frames, selection of frames, measurements associated with dispensing of spectacle. Ability to dispense septateles with appropriate instructions, perform touble-blooting and resolve complaints of the potents To gain theoretical knowledge and basic practical skill in handling instruments used in optomery/ uphthalmogy clinical practices To understand the drug compositions, actions, uses, advence effects and mode of administration of drugs, especially related to eyes. COI Discuss about health informatics and different IT applications in allied health care. Explain the function of Hospital Information Systems Understand medical standards COI To understand the importance, study designs & Methodology of research	PO1.PO2 ,PO3,PO7.PO8 PO1-PO8 PO1-PO8 PO1-PO8 PO1-PO8 PO1-PO8	CAP CAP CAP CAP CA CA CA	1 2'-5 6'-10 1'-11 1'-10 1,2,3,4,5 6,7,8 9,10,11,12 1,2,3	45 5 5 15 25 45 45 45 30 16 15 14 45 15 15	100 11 33 56 100 100 100 100 36% 33% 100% 33%	5 35 5 45 15	6 39 6 44 50 50	5 35 5 45 15 15	0 45 6 15 39 85 6 35 50 135 50 75 0 30 16 15 14 45 15	100	1 3 2 3 3 2 2 2 2

		CO1 A detailed knowledge of lens design, materials, and manufacture for RGP including verification	PO1,PO2 PO3,PO7,PO8	С	1,2,3,4,5,6,7, 8,9,10	23	51	1	3	0	0 2	14 32	2
	Contact Lenses I BOPTOM 123 L		PO1-PO8	CAP	11,12,13,14, 15	10	22	5	17	5	17	27	1
		An ability to fit and assess a range of RGP Lenses for Sperical, regular and irregular astigmatsism toric and Prebyopia correction CO4 Ability to finalise the CL design for various ocular conditions and patient demands, recommending care and maintanace schedule	PO1-PO8	CAP	16'-17	5	11	5	17	5	17	.5 20	1
		COS Mentify and manage the adverse effects of contact lens	PO1-PO8	CAP	18'-22	7	16	4	13	5	1 1	.6 21	1
_			PO1,PO2 PO3,PO7,PO8	с	1'- 4	45 17	100 28	15 0	0	0		75 100	1
		CO2 Provide a detailed explanation of, and differentiate between the etiology, investigation and management of binocular vision anomalies	PO1-PO8	CAP	5'- 18	30	50	8	27	8	27	16 51	3
	Binocular Vision I & II BOPTOM 124 L	CO3 Adapt skills and interpret clinical results following investigation of binocular vision anomalies appropriately and safely	PO1-PO8	CAP	5'- 18	10	17	7	23	7	23 2	14 27	1
		To understand the role of an optometrists for co management of an starbismic anomalies with ophthalmologist	PO1-PO8	CAP	5'- 18	3	5	0	0	0		3 3	1
		CO1 Understanding definition ,epidemiology and terminology of Low Vision	PO1,PO2 PO3,PO7,PO8	с	1 & 2	4	13	0	0	0	0 0	4 13	1
Semester 5			PO1-PO8	CAP	3 & 4	4	13	0	0	0	0	4 13	1
	Low Vision Aids BOPTOM 125 L		PO1-PO8	CAP	5 & 6	5	17	0	0	0	0	5 17	1
		CO4 Ability to select and prescribe suitable functional adaptive devices for LV patients	PO1-PO8	CAP	7' - 10	11	37	0	0	0	0 1	1 37	2
			PO1-PO8	CAP	11 & 12	6	20	0	0	0	0	6 20	1
		Ability to establish effective communication with individuals, their family, careers and with other organizations and professionals for effective management of Lypatient				30	57		0	0	0 3	0 100	
		CO1 To have an understanding of various systemic diseases that all affect the eyes	PO1,PO2 PO3,PO7,PO8	С	1'-17	20	44	0	0	0	0 2	20 44	2
	Systemic Diseases BOPTOM 126 L		PO1,PO2 PO3,PO7,PO8	С	1'-17	20	44	0	0	0	0 2	10 44	2
		To understand the role of an optometrists for co management of an systemic diseases with other health care professionals	PO1-PO8	CAP	1'-17	5	11	0	0	0	0 4	5 11	1
		COI	PO1-PO8	C,A	1,2,3,4,6	40	89%					10 89%	3
	Basics of Clinical Skill Learning CEC 005 L	After successful accomplishment of the course, the students would be able to Measure Vital Signs, do basic physical Examination of the patients, NG tube basics, Administration of Medicines	PU1-PU8	C,A	1,2,3,4,0	40	65%					89%	·
		The students will learn about Asepsis, and the Cleanliness related to asepsis and on mobility of the patients	PO1-PO8	C,A	5	5	11%					5 11%	1
						45	1		0		0 4	100%	
		CO1 Understand and apply resource management concepts (personnel, finance, and material resources) and the processes and strategies needed in specific hospital sectors	PO1-PO8	C,A	1,2	15	33%				1	.5 33%	2
	W 210 2 W	CO2 Communicate effectively and develop their leadership and teambuilding abilities	PO1-PO8	C,A	4	10	22%				1	.0 22%	1
	Hospital Operation Management CEC 006 L	CO3 Apply modern change management and innovation management concepts to optimize structures	PO1-PO8	C,A	3	10	22%				1	.0 22%	1
		Analyze existing hospital service policies and enhance their alignment within the local and national context	PO1-PO8	C,A	5	10	22%					.0 22%	1
		CO1 A detailed knowledge of lens design, materials, and manufacture for Soft contact lenses including verification , p.	PO1,PO2 PO3,PO7,PO8	С	1,2,3,4,5,6,7, 8,9,10		51	1	3	0	0 2	14 32	2
	Contact Lenses II BOPTOM 128 L	An ability to fit and assess a range of SCL Lenses for Sperical, astigmatism and Prebyopia correction	PO1-PO8	CAP	11,12,13,14, 15	10	22	5	17	5	17	27	1
		CO3 Ability to finalise the CL design for various ocular conditions and patient demands, recommending care and maintanace schedule	PO1-PO8	CAP	16'-17	5	11	5	17	5	17	.5 20	1
		CO4 Identify and manage the adverse effects of contact lens	PO1-PO8	CAP	18'-22	7	16	4	13	5		.6 21	1
		COI To understand visual demands for various kinds of sports for athletes	PO1,PO2 PO3,PO7,PO8	С	1'- 6	45 12	100 40	15 0	0	0	0 1	2 40	2
1													

ı	1		1			1		I					
		CO2 To perform a comprehensive sports vision assessment for athletes	PO1-PO8	CAP	6'- 7	6	20	0	0	0	0	6 20	1
	Sports Vision BOPTOM 129 L	CO3 To be able prescribe vision correction appropriate to address the visual demands for sport activity	PO1-PO8	CAP	8',9 & 10	8	27	0	0	0	0	8 27	1
		CO4 To be able to prescribe vision training and protective devices to minimize ocular trauma due to sports.	PO1-PO8	CAP	11'-13	4	13	0	0	0	0	4 13	1
			PO1,PO2	_	1',2,5 ,10,	30	100	0	0	0	7	30 100 13 43	
		CO1 To gain knowledge on common ocular diseases in pediatric and geriatric age group.	,PO3,PO7,PO8	С	13,19,20,24	11	37	0	0	2	7	13 43	2
		Be able to identify, investigate the age related changes/ developmental and congenital anomalies in the eyes.	PO1,PO2 ,PO3,PO7,PO8	C A	3,4,11,12,14 ,15,16	9	30	0	0	7	23	16 53	3
		CO3 Communicate and counsel effectively with the pediatric and geriatric patients and their attendees.	PO1-PO8	CA	8,9,17,18,19 ,21,22,23,	1	3	0	0	5	17	6 20	1
Semester 6	Pediatric and Geriatric Optometry BOPTOM 130 L	To dispense appropriate optical correction in the form of Spectacle/ Contact lenses/ LVA with proper instructions.	PO1-PO8	CAP	8,9,17,18,19 ,21,22,23,	7	23	0	0	6	20	13 43	2
		CO5 Communicate professionally with other health care professionals in terms of accurate presentation of patients' symptoms, critical analysis of clinical findings and suitable plan of action	PO1-PO8	CA	8,9,17,18,19 ,21,22,23,	1	3	0	0	5	17	6 20	1
		CO6 Recognize the professional responsibility and need of life-long learning in geriatric and pediatric eye care.	PO1-PO8	CAP	8,9,17,18,19 ,21,22,23,	1	3	0	0	5	17	6 20	1
						30	100	0	0	30	100	60 200	
		col	PO1,PO2 ,PO3,PO7,PO8	1	4	13	0	0	0	0	0	4 13	1
		To gain and demonstrate the knowledge of visual requirements of jobs• To be able to apply different types of protocols for doing a right clinical history according to the patient profile and its context (workplace, free activities, etc).											
		To be able to know the functional limits of human vision and its relationship with age, as well as at occupational contexts and free activities, linking with the task visibility factors	PO1,PO2 ,PO3,PO7,PO8	4	2	7	0	0	0	0	0	2 7	1
		соз	PO1-PO8	6	3	10	0	0	0	0	0	3 10	1
		To acquire ability for examining, give diagnosis, and manage visual anomalies, with special relevance in the differential diagnosis related with occupational and free activity contexts											
	Occupational Optometry BOPTOM 131 L	CO4	PO1-PO8	2,3	6	20	0	0	0	0	0	6 20	1
		To be able to evaluate eye hazards in occupational or free-time activities under radiant energy exposures, as well as continuous light sources such as laser, and understand their controls for avoiding eye injuries											
		CO5 To be able to identify and analyze environmental and occupational hazards causing eye injuries (mechanic, chemical, electric, etc).	PO1-PO8	5	3	10	0	0	0	0	0	3 10	1
		CO6 To acquire ability for evaluating the visual performance of any patient and propose appropriate optical prescription, environment design, visual therapy, etc	PO1-PO8	6,7,10	9	30	0	0	0	0	0	9 30	1
		To be able to communicate and inform to patient about diagnostic tests, him/her clearly explaining the interpretation and their consequences of their diagnosis.	PO1-PO8	9	3	10	0	0	0	0	0	3 10	1
		CO8 To gain knowledge of the international and national standards related to visual and eye health in variety of occupations	PO1-PO8	8	3	10	0	0	0	0	0	3 10	1
					33	110	0	0	0	0	0	33 110	

CO PO MAPPING (Matrix)

Programe - B.Sc AT OT

Semester - Smester III, IV, V & VI

- PO1 Knowledge & Skill Development- An ability to apply knowledge of healthcare technology (including clinical subjects, investigations/ Procedures, handling instruments)
- PO2 Critical Thinking To apply professional judgment and rational thinking in decision-making
- **PO3** Problem solving Correlation of professional knowledge applied to current clinical or healthcare practices.
- PO4 -Professional ethics To adopt and apply code of ethics prescribed by professional bodies in professional and social context. Maintain appropriate boundaries with patients and care givers and maintain confidentiality.
- PO5 Communication skills To communicate effectively with the patients, care givers and other healthcare professional for addressing patient related issues and to deliver and information
- PO6 Individual / Team work ability to function on multi-disciplinary teams
- PO 7- Holistic development: Development of intellectual mental, Physical, Emotional & Social abilities, so as to be capable of facing the demands & challenges of every day life.
- PO8 Lifelong learning To develop continuous learning attitude in context of research, advances in clinical practices and to inculcate professionalism and evidence based practices

PO Mapping same with correlation level 3,2,1 The notation of 1 - low, 2 - moderate, 3 - high

			TI S	Knowledge & Skill Development	Critical Thinking		Profession al ethics	Commun ication skills	Individual / Team work	Holistic develop ment	Lifelong learning	
Semester	Course / Course Code	Course Outecom e	Details	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	Average
	Introduction To	CO1	Demonstrate ability	3	2	2	3	2	3	1	3	2.3
	Operation Theatre	CO2	Able to identify and	1	2	1	2	2	2	1	3	1.7
	Technology (OT)	CO3	Manage and maintain	3	3	2	3	2	2	2	3	2.5
	Average			2.3	2.3	2.6	2	2	2.3	1.3	3	2.2
	Introduction to Anesthesia	CO1	Suggesting a simple	3	2	3	3	2	2	2	3	2.5
	Technology (AT)	CO2	Monitoring in the Op	3	2	2	2	3	3	2	3	2.5
	Average			3	2	2.5	2.5	2.5	2.5	2	3	2.5
	Principles Of	CO1	Students understand	3	3	3	3	2	3	2	3	2.7
	Anesthesia	CO2	Able to Monitor the	3	3	3	3	3	3	3	3	3
Semester III	Average			3	3	3	3	2.5	3	2.5	2	2.7
		CO1	Students will become	2	2	3	3	2	3	2	3	2.5
	Pursuit of Inner Self	CO2	Student's ability to p	2	2	2	2	2	2	2	2	2
	Excellence (POIS)	CO3	Enhanced communic	2	2	2	2	2	2	2	2	2
	GEC 001 L	CO4	Students will be able	3	2	2	3	3	3	2	3	2.6
	GLC 001 L	CO5	Students will observe	3	2	2	3	2	1	1	2	2
		CO6	With the developme	3	2	2	2	2	1	1	3	2
	Average			2.5	2	2.1	2.5	2.1	2	1.6	2.5	2.1
	Organizational	CO1	Describe and apply r	1	1	1	3	2	3	1	2	1.7
	Behavior GEC 002	CO2	Explain the effect of	1	1	1	3	2	3	1	2	2.3
	L	CO3	Explain types of tear	1	1	1	3	2	3	1	2	1.7
	Average			1	1	1	3	2	3	1	2	1.75
	Basic Techniques of		Student learns the ra	3	3	3	2	3	3	2	3	2.7
	Anesthesia	CO2	Incorporates Basic u		3	3	2	3	3	2	3	2.7
	Allestriesia	CO3	Performs skills for M		3	3	2	3	3	2	3	2.7
	Average			3	3	3	2	3	3	2	3	2.7

1	To Operation Thetare Technology Average Average Computers and Applications Applications Average Computers and Applications Average Computers and Applications Average Computers and Applications Average Computers and Applications Computers and Applica											
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	_	CO1	Students understand	3	3	3	2	3	3	2	3	2.7
	of Anestnesia											
	Influencing Choice COI Students understand 3 3 3 2 3 3 2 3 3 2 3 2.7											
Semesterv	## Influencing Choice of Anesthesis of Citical Anesthesis of Anesthesis of Anesthesis of Anesthesis of Citical Anesthesis of Anesthesis of Anesthesis of Anesthesis of Citical Anesthesis of Anesthesis of Anesthesis of Citical Anesthesis of Anesthesis of Citical Anesthe											
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	Average			3	3	3	2	3	3	2	3	2.7
		CO1	Discuss about health				1		1	1		
	^	CO1 Students understand Students under										
	Applications	Average COI Students understant Solution Students Solution Students Solution Students Solution Solu					1.6					
	Average			2	2	2	1	2	1	1	2	1.6
		CO1	To understand the in	1	1	1	1	1	1	1	2	1.1
		1	1	1	1	1	1					
				1.5	1	1	1	1	1	1	3	1.3
	1	CO1	Able to assist anesth	3	3	3	2	3	3	2	3	2.7
	Average	601	Aldada		3			3		2		
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Semester V	Influencing Choice of Anesthesia Average Average Coopulars and Applications Average Coopular to the Applications Average Basic of Citical Applications Cool Able to assist aneast Average Averag					2.3						
			O1 Students know thore					3				
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		CO2	The students will lea					3				
	Average	GO1					2			2		
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	Wianagement						1			1		
	Average	CO4	Analyze existing nos				1			1		
										-		
	Basic Intensive Care	CO1	Should be able to dea	3	3	3	2	3	3	2	3	2.7
	Average			3	3	3	2	3	3	2	3	2.7
	Specialized											
Semester VI	Anesthesia and	CO1	able to help the anae	3	3	3	2	3	3	2	3	2.7
Schiester VI	Surgery											
	Average									2		
			+							1		
	Surgery and	CO2	Able to manage Inde							<u>l</u>		
	Average											

		MAPPING AVERA	GE (Progra	me - B.Sc	AT OT)					
SEMESTER	COURSE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	Average
	Introduction To Operation Theatre Technology	2.3	2.3	2.6	2	2	2.3	1.3	3	2.2
	Introduction to Anesthesia Technology (AT)	3	2	2.5	2.5	2.5	2.5	2	3	2.5
SEM III	Principles Of Anesthesia	3	3	3	3	2.5	3	2.5	2	2.7
	Pursuit of Inner Self Excellence (POIS) GEC 001	2.5	2	2.1	2.5	2.1	2	1.6	2.5	2.1
	Organizational Behavior GEC 002 L	1	1	1	3	2	3	1	2	1.7
	Basic Techniques of Anesthesia	3	3	3	2	3	3	2	3	2.7
	Medical Diseases Influencing Choice of Anesthesia	3	3	3	2	3	3	2	3	2.7
SEM IV	Medicine Relevant To Operation Theatre	3	3	3	2	3	3	2	3	2.7
	Computers and Applications	2	2	2	1	2	1	1	2	1.6
	Biostatistics and Research Methodology	1.5	1	1	1	1	1	1	3	1.3
	Basics of Surgical Procedures	3	3	3	2	3	3	2	3	2.7
	CSSD procedures	2.5	1	2	2	1	2	1	2.7	1.7
SEM V	Advance Anesthesia Techniques	3	2	2	2	3	2	2	3	2.3
	Basics of Clinical Skill Learning	3	2	2	2	3	2	2	3	2.3
	Hospital Operation Management	2	2	2	1	2	2	1	2	1.7
	Basic Intensive Care	3	3	3	2	3	3	2	3	2.7
SEM VI	Specialized Anesthesia and Surgery	3	3	3	2	3	3	2	3	2.7
	Electronics and Technology in Surgery and	2	2	2	2	2	2	1	2	1.8

					CO & 1	PO Relation	ships (Mappi	ng Strengt	h)						
					Progra	me - Bsc N	ledical Lab '	Technolog	SY						
					Sem	ester - Sn	nester III, IV	, V & VI							
				CO & PO	Damain	l l mit	1		lah		Cli	-:!	_	-t-l	Strength Level of
				Relationships	Domain	Unit	Lecti	ure	Lab	<u> </u>	CIII	nical 	<u> </u>	otal 	CO addressing to
Samastav	Course & Course	CO	CO Detail												PO Level 3:>50%, Level 2: 30%-50%, Level 1:< 30%, Not addressed :<5%
Semester	code			PO1-PO8	C.A.P	No	Hrs	%	Hrs	%	Hrs	%	Hrs	%	
semester	Introduction To Operation Theatre Technology (OT)	CO1	Demonstrate ability to prepare and maintain Operation Theater	1468	C.A.P CAP	No 1	Hrs 10	22.2	Hrs -	-	Hrs 36	50	Hrs 46	39.3	2
semester	Introduction To Operation Theatre	CO1	Demonstrate ability to prepare and maintain Operation	1,4,6,8					Hrs -						2
semester	Introduction To Operation Theatre		Demonstrate ability to prepare and maintain Operation Theater	1,4,6,8 8	САР	1	10	22.2	-		36	50	46	39.3	2 2 1

Introduction to Anesthesia Technology (AT)	CO1	Suggesting a simple anesthetic plan commonly used anesthesia noninvasive	1,3,4,8	СР	1,2,4	27	60	-	-	36	60	63	60	3
	CO2	Monitoring in the Or	1,5,6,8	СР	3,5	18	40	-	-	24	40	42	40	2
Average						45	100	-	-	60	100	105	100	
Principles Of Anesthesia	CO1	Students understand the Basic anaesthetic equipment the working principle of the AT equipment	1,2,3,4,6,8	СР	1,2,3	13	28.8	-	-	-	-	13	28.8	1
	CO2	Able to Monitor the physiological parameters	1,2,3,4,5,6,7,8	СР	4,5,6,7,8,9 ,10,11	32	71.1	-	-	-	-	32	71.1	3
Average						45	100					45	100	
	CO1	Students will become self dependent, more decisive and develop intuitive ability for their study and career related matter.	1,4,5,8	CA	3	10	22.2	-	-	-	-	10	22.2	1
	CO2	Student's ability to p	1,4,8	CA	-	-	-	-	-	-	-	-	-	
	CO3	Enhanced communication skills, public speaking & improved Presentation ability.	1,5	CA	2	15	33.3	-	-	-	-	15	33.3	2
Pursuit of Inner Self Excellence (POIS) GEC 001 L	CO4	Students will be able to explore their inner potential and inner ability to become a successful researcher or technician & hence become more focused	1,5	А	-	-	-	-	-	-	-	-	-	
	CO5	Students will observe	1,4	Α	4	10	22.2	-	-	-	-	10	22.2	1

Semester III		CO6	With the development of personal attributes like Empathy, Compassion, Service, Love & brotherhood, students will serve the society and industry in better way with teamwork and thus grow professionally.	1,8	CA	1	10	22.2	-	-	-	-	10	22.2	1
	Average						45	100					45	100	
		CO1	Describe and apply motivation theories to team and organizational scenarios in order achieve a team's or an organization's goals and objectives.	4,6	А	1,5	12	26.6	-	-	-	-	12	26.6	1
	Organizational Behavior GEC 002 L	CO2	Explain the effect of personality, attitudes, perceptions and attributions on their own and other's behaviours in team and organizational settings.	4,6	CA	2,3,4	20	44.44	-	-	-	-	20	44.44	2

	CO3	Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style.	4,6	CA	6,7	13	28.8	-	-	-	-	13	28.8	1
Average						45	100					45	100	
	CO1	Student learns the rational use selection of regional anaesthesia techniques and the choice of local anaesthesia.	1,2,3,5,6,8	СР				-	-					
Basic Techniques of Anesthesia	CO2	Incorporates Basic understanding of immediate in preoperative patient management.	1,2,3,5,6,8	САР	1,2	30	100	-	-	60	100	90	100	3
Average	CO3	Performs skills for Management of patients in post- anesthesia recovery room	1,2,3,5,6,8	САР		30	100	-	-	60	100	90	100	

	Medical Diseases Influencing Choice of Anesthesia	CO1	Students understand the apply the knowledge related to drugs, calculations of anesthetic medications in different cardiovascular, respiratory and renal diseases.	1,2,3,5,6,8	С	1,2,3,4,5, 6,7,8,9,10, 11,12	4 5	100	-	-	-	-	4 5	100	3
	Average						45	100			-	-	45	100	
Semesterv IV	Medicine Relevant To Operation Theatre Technology	CO1	Students know thoroughly the medicines relevant to OT such Antisialagogues, Sedatives, Anxiolytics and Narcotics understand the use of muscle relaxant and Local Anaesthetics commonly used in OT have knowledge and use of Emergency medicines	1,2,3,5,6,8	СР	1,2,3,4,5	45	100	-	-	-	-	45	100	3
	Average						45	100			-	-	45	100	
	nputers and Applicati		Discuss about health informatics and different IT applications in allied health care.	1,2,3,5,8	СР	1,2,3,4	11	24.4	-	-	-	-	11	24.4	1
		CO2	Explain the function	1,2,3,5,8	CAP	5,6,7,8, 9,10	29	64.4	-	-	-	-	29	64.4	3
		CO3	Analyze medical star	1,2,3,5,8	СР	11,12	5	11.1	-	-	-	-	5	11.1	0
	Average						45	100					45	100	
	[CO1	To understand the in	1,8	CP	1,2,3,4	20	44.4	-	-	-	-	20	44.4	2

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	Biostatistics and Research Methodology	CO2	To learn in detail about sampling, probability and sampling distribution, significance tests correlation and regression, sample size determination, study design and multivariate analysis.	1,8	САР	5,6,7,8,9	25	55.5	-	-	-	•	25	55.5	3
	Average						45	100					45	100	
	Basics of Surgical Procedures	CO1	Able to assist anesth	1,2,3,5,6,8	CAP	1,2	30	100	-	-	60	100	90	100	3
	Average						30	100			60	100	90	100	
		CO1	Able to manage Cent	1,8	СР				-	-	-	-			
		CO2	Show efficiency in m	1,8	СР				-	-	-	-			
	CSSD procedures	CO3	Independently demonstrated skills of disinfection and sterilization	1,8	СР	1	30	100	-	-	-	-	30	100	3
		CO4	Verbalizes methods a	3,4,6,8	CAP				-	-	-	-			
	Average						30	100					30	100	
	Advance Anesthesia Techniques	CO1	Able to assist anaesthesiologists in advanced anaesthesia procedures such as artificial ventilation and cardiopulmonary bypass.	1,5,8	CAP	1	45	100			60	100	105	100	3
	Average						45	100			60	100	105	100	

	Basics of Clinical Skill Learning	CO1	After successful accomplishment of the course, the students would be able to Measure Vital Signs, do basic physical Examination of the patients, NG tube basics, Administration of Medicines	1,5,8	CAP	1,2,3,4,6	40	88.8	-	-	-	-	40	88.8	3
Semester V		CO2	The students will learn about Asepsis, and the Cleanliness related to asepsis and on mobility of the patients	1,5,8	СР	5	5	11.1	-	-	-	-	5	11.1	0
	Average						45	100					45	100	
			Understand and												
		CO1	apply resource management concepts (personnel, finance, and material resources) and the processes and strategies needed in specific hospital sectors	1,2,3,5,6,8	САР	1,2	15	33.33	-	-	-	-	15	33.33	2

		CO3	Apply modern change management and innovation management concepts to optimize structures	1,2,3,5,6,8	САР	3,4	20	44.44	-	-	-	-	20	44.44	2
		CO4	Analyze existing hospital service policies and enhance their alignment within the local and national context	1,2,3,5,6,8		5	10	22.22	-	-	-	-	10	22.22	1
	Average						45	100					45	100	
	Basic Intensive Care		Should be able to demonstrate all the basic intensive care required at operation theatre and in handling patient in crisis	1,2,3,5,6,8	CAP	1-16	30	100	-	-	-	-	30	100	3
	Average						30	100	-	-	-	-	30	100	
Semester VI	Specialized Anesthesia and Surgery	CO1	able to help the anaesthetist in administering anaesthesia, assist in various procedures and help in continues monitoring of patients.	1,2,3,5,6,8	CAP	1,2,3,4	60	100	-	-	-	-	60	100	3
	Average						60	100	-	-	-	-	60	100	
	Electronics and Technology in	CO1	Knowable about Basic electronics, basic principle, care and maintenance of machine at OT	1,2,3,4,5,6,8	СР	1	25	55.5	-	-	-	-	25	55.5	3
	Surgery and Anesthesia	CO2	Able to manage Indenting, Record keeping and inventory maintenance	1,2,3,4,5,6,8	СР	2	20	44.4	-	-	-	-	20	44.4	2
	Average						45	100	-	-	-	-	45	100	

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CO PO MAPPING (Matrix)

Programe - B.Sc Cardic Care Technology

Semester - Smester III, IV, V & VI

- PO1 Knowledge & Skill Development- An ability to apply knowledge of healthcare technology (including clinical subjects, investigations/ Procedures, handling instruments)
- PO2 Critical Thinking To apply professional judgment and rational thinking in decision-making
- PO3 Problem solving Correlation of professional knowledge applied to current clinical or healthcare practices.
- PO4 -Professional ethics To adopt and apply code of ethics prescribed by professional bodies in professional and social context. Maintain appropriate boundaries with patients and care givers and maintain confidentiality.
- PO5 Communication skills To communicate effectively with the patients, care givers and other healthcare professional for addressing patient related issues and to deliver and information
- PO6 Individual / Team work ability to function on multi-disciplinary teams
- PO 7- Holistic development: Development of intellectual mental, Physical, Emotional & Social abilities, so as to be capable of facing the demands & challenges of every day life.
- PO8 Lifelong learning To develop continuous learning attitude in context of research, advances in clinical practices and to inculcate professionalism and evidence based practices

PO Mapping same with correlation level 3,2,1 The notation of 1 - low, 2 - moderate, 3 - high

				Knowled ge & Skill Develop ment	Critical Thinking	Problem solving	Professio nal ethics	Commun ication skills	Individual / Team work	Holistic develop ment	Lifelong learning	
Semester	Course / Course Code	Course Outecome	Details	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	
		CO1	To understand Coronary Anato	3.0	3.0	3.0	1.0	1.0	1.0	1.0	3.0	2.0
	Applied Anatomy,	CO2	To enable students, differentia	3	2	3	2	2	1	2	3	2.3
	Physiology, Pharmacology in	CO3	To enable students, a prelimin		2	1	1	2	1	2	2	1.8
	Cardiac Care BCCT 112 L	CO4	Students will be proficient in P		2	1	1	2	1	2	2	1.8
		CO5	Also recent advances in pharm		2	2	1	2	1	2	3	2.0
	Average			3.0	2.0	1.8	1.3	2.0	1.0	2.0	2.5	2.6
		CO1	To develop understanding rega	3	2	2	1	1	1	3	3	2.0
	Basic Electrocardiography BCCT 113 L	CO2	 Describe the proper hook-up 		2	2	1	1	1	3	3	2.0
		CO3	Identify basic normal ECG wave		2	2	1	1	1	3	3	2.0
		CO4	•Enumerate the measures to	3.0	2.0	2.0	1.0	1.0	1.0	3.0	3.0	2.0
	Average			3	2	2	1	1	1	3	3	2
		CO1	To develop an understanding r	3	3	3	2	2	1	1	3	2.3
	Basic Echocardiography	CO2	•To train students to perform E	3	3	2	2	2	1	1	3	2.1
	BCCT 114 L	CO3	 To make students aware of r 	3	3	2	1	2	1	1	3	2
		CO4	 ◆To understand the role of Ca 	3	3	2	1	2	1	1	3	2
	Average			3	3	2.3	1.5	2	1	1	3	16.8
		CO1	Students will become self depe	3	2	2	1	2	3	2	2	2
		CO2	 Student's ability to present t 	3	2	2	1	2	2	2	2	2
		CO3	Enhanced communication sk	3	2	2	1	2	2	2	2	2
	Pursuit of inner self	CO4	 Students will be able to expl 	3	2	2	1	2	2	2	2	2
	excellence GEC 001 L		• Students will observe significant reduction in stress									
		CO5	level.	3	2	2	1	2	2	2	2	2
		CO6	With the development of per	3	2	2	1	2	2	2	2	2
	Average			3	2	2	1	2	2	2	2	2

ı		CO1	December and another methods of	2	1 2		1 1	1 2	1 2	1 2	1 2	1 2
	Organizational Behavior	CO1	Describe and apply motivation	3	3	2	1	2	2	2	3	2
	GEC 002 L	CO2	Explain the effect of personal	3	3	2	1	2	2	1	3	1.8
		CO3	Explain types of teams and a	3	3	2	l	2	2	2	3	2
	Average			3	3	2	1	2	2	1.6	3	1.9
	Development of	CO1	This course will provide overal	3	2	3	3	2	1	1	3	2.2
	Cardiovascular System:	CO2	 To encourage student to app 	3	2	3	3	2	1	1	3	2.2
	Average			3	2	3	3	2	1	1	3	2.2
	Cardiovascular Diseases	CO1	This course will cover common	3	3	3	3	2	1	1	3	2.37
	pertaining to Cardiac Care	CO2	•Along with outline of clinical	3	3	3	3	2	1	1	3	2.37
	Average			3	3	3	3	2	1	1	3	2.37
	Medical I nstrumenttion	CO1	The course is designed to make	3	3	3	3	2	1	1	3	2.37
	Relevant to Cardiac Care	CO2	The fundamental principles	3	3	3	3	2	1	1	3	2.37
Semester 4	Technology BCCT 118 L	CO3	The course is designed to make	3	3	3	3	2	1	1	3	2.37
	Average			3	3	3	3	2	1	1	3	2.37
	<u> </u>	CO1	Discuss about health informati	3	2	2	1	2	1	1	3	1.8
	Computers and	CO2	Explain the function of Hosp	3	2	2	1	2	1	1	3	1.8
	Applications AEC 003 L	CO3	Analyze medical standards	3	2	2	1	2	1	1	3	1.8
	Average	232	,a., 22a. a.a. a.a.	3	2	2	1	2	1	1	3	1.8
	Biostatistics and Research	CO1	To understand the importance	3	2	3	3	2	1	1	3	1.8
	Methodology AEC 004 L	CO2	To learn in detail about same	3	2	3	3	2	1	1	3	1.8
	Average	<u> </u>	- To learn in detail about sain	3	2	3	3	2	1	1	3	1.8
	<u> </u>	CO1	To develop an understanding r	3	3	3	3	2	1	1	3	1.8
	Advanced	CO2	•To train students to perform	3	3	3	3	2	1	1	3	1.8
	Electrocardiography BCCT	CO3	•To make students aware of re	3	3	3	3	2	1	1	3	1.8
	120 L	CO4	•To understand the role of Ca	3	3	3	3	2	1	1	3	1.8
	Ayaraga		To dilderstand the role of ca	3	3	3	3	2	1	1	3	1.8
	Average	CO1	To develop an understanding r	3	3	3	3	1	1	1	3	2.2
	Advanced	CO2	•To train students to perform	3	3	3	3	2	1	1	3	2.2
	Echocardiography BCCT	CO2	•To make students aware of r	3	3	3	3	2	1	1	3	2.2
	121 L	CO4	•To understand the role of Car	3	3	2	3	2	1	1	3	2.2
	A 712 112 2 2	CO4	• 10 understand the role of Car	3		2		2	1	1	3	2.2
	Average			3	3	<u> </u>	3	<u> </u>	1	1	3	2.2
Semester 5	Invasive Cardiology BCCT											
	122 L	CO1	To enable students to not only		3	3	3	2	l	l	3	2.2
	Average			3	3	3	3	2	1	1	3	2.2
	Basics of Clinical Skill	CO1	After successful accomplishme		3	2	2	2	2	2	3	2.3
	Learning CEC 005 L	CO2	•The students will learn about	3	3	2	2	2	2	2	3	2.3
	Average			3	3	2	2	2	2	2	3	2.3
		CO1	Understand and apply resource	3	3	3	1	1	2	1	3	2.1
	Hospital Operation	CO2	Communicate effectively and	3	3	3	1	1	2	1	3	2.1
	Management CEC 006 L	CO3	Apply modern change manag	3	3	3	1	1	2	1	3	2.1
		CO4	Analyze existing hospital serv	3	3	3	1	1	2	1	3	2.1
	Average			3	3	3	1	1	2	1	3	2.1
	Cardiac Catheterization	CO1	The students will gain knowled	3	3	3	2	2	1	1	3	2.2
	BCCT 124 L	CO2	•To enable students, understa	3	3	3	2	2	1	1	3	2.2
	DCC1 124 L	CO3	•The occurrence and managen	3	3	3	2	2	1	1	3	2.2
Semester 6	Average			3	3	3	2	2	1	1	3	2.2

Pediatric Interventions	CO1	The students will gain knowled	3	3	3	2	3	2	2	3	2.8
BCCT 125 L	CO2	•The occurrence and manage	3	3	3	2	3	2	2	3	2.8
Average			3	3	3	2	3	2	2	3	2.8

			MAPPING							
Semester	Subject	PO1	Programe - B.Sc Car P02	PO3	ecnnology PO4	PO5	PO6	PO7	PO8	Avaraga
Semester	Applied Anatomy,	POI	PU2	POS	PO4	P05	PU	PO7	PU8	Average
	Physiology, Pharmacology in Cardiac Care BCCT 112 L	3.0	2.0	1.8	1.3	2.0	1.0	2.0	2.5	2.6
	Basic Electrocardiography BCCT 113 L	3	2	2	1	1	1	3	3	2
Semester 3	Basic Echocardiography BCCT 114 L	3	3	2.3	1.5	2	1	1	3	16.8
	Pursuit of inner self excellence GEC 001 L	3	2	2	1	2	2	2	2	2
	Organizational Behavior GEC 002 L	3	3	2	1	2	2	1.6	3	1.9
	Development of Cardiovascular System: Fetal and Neonatal BCCT 116 L	3	2	3	3	2	1	1	3	2.2
Semester 4	Cardiovascular Diseases pertaining to Cardiac Care Technology	3	3	3	3	2	1	1	3	2.37
Jemester 2	Medical I nstrumenttion Relevant to Cardiac Care Technology BCCT 118 L	3	3	3	3	2	1	1	3	2.37
	Computers and Applications AEC 003 L	3	2	2	1	2	1	1	3	1.8
	Biostatistics and Research Methodology AEC 004 L	3	2	3	3	2	1	1	3	1.8
	Advanced Electrocardiography BCCT 120 L	3	3	3	3	2	1	1	3	1.8
	Advanced Echocardiography BCCT 121 L	3	3	2	3	2	1	1	3	2
Semester 5		3	3	3	3	2	1	1	3	2
	Basics of Clinical Skill Learning CEC 005 L	3	3	2	2	2	2	2	3	2
	Hospital Operation Management CEC 006 L	3	3	3	1	1	2	1	3	2

Cardiac Catheterization Semester 6 BCCT 124 L
Pediatric Interventions
BCCT 125 L

CO & PO Relationships (Mapping Strength)

Programe - B.Sc Cardic Care Technology

Semester - Smester III, IV, V & VI

				CO & PO Relations	1	Unit	Lec	ture	Lab		Clin	nical	Total		Level of CO addressin
Semester	Course & Course code	CO	CO Detail	PO1-PO8	C.A.P	No	Hrs	%	Hrs	%	Hrs	%	Hrs	%	addressin a to PO
	_	CO1	To understand Coronary Anatomy	PO1, PO2	C,A	1,2	15	25	0	0	0	0	15	13%	1
		CO2	To enable students, differentiate between normal heart sounds and murmurs	PO1, PO3,PO8	C,A	3,	10	17%			0	0	10	8%	1
	Applied Anatomy	CO3	To enable students, a preliminary understanding of the circulatory system from a physiological and functional perspective, as well as related terminologies.	PO1	C,A	1,2,4	15	25			0	0	15	13%	1
	Applied Anatomy, Physiology, Pharmacology in Cardiac Care BCCT 112 L	CO4	Students will be proficient in Pharmacology with proficient knowledge about the different drugs / medicines to be given in various cardiovascular diseases, dose calculation and mode of administration.	PO1	C,A	7,8,9	20	33			0	0	20	17%	2
		CO5	Also recent advances in pharmacology will play a key role in research aspect of the students.	PO1,PO8	C,A	0,	10	0			0	0	10	8%	1
							60	100%			0	0	60	100%	
		CO1	To develop understanding regarding Electrocardiography and its procedure.	PO1, PO2,PO3, P08	C,A,P	1,2,	20	44%	5	13%	5	13%	25	29%	2
		CO2	•Describe the proper hook- up procedure for a 12-Lead ECG	PO1,PO7, PO8	C,A,P	2	5	11%	5	13%	5	13%	15	18%	1

	Basic Electrocardiography BCCT 113 L	СОЗ	Identify basic normal ECG waveform morphology and common interpretation.	PO1,PO7, PO8	C,A,P	4,5,6,7	20	44%	5	13%	5	13%	30	35%	2
		CO4	•Enumerate the measures to be taken before, after and during ECG procedure	PO1,PO7, PO8	C,A,P	0		0%	5	13%	5	13%	10	12%	1
				PUI,			45	100%	20	50%	20	50%	85	100%	
		CO1	To develop an understanding regarding Echocardiography.	PO2,PO3,	C,A,P	1,3,4,6	10	33%	7.5	13%	7.5	13%	17.5	19%	1
		CO2	To train students to perform Echocardiography examinations by explaining the position of transducers.	PO1,PO&, PO8	C,A,P	1,4	4	13%	7.5	13%	7.5	13%	11.5	13%	1
	Basic Echocardiography BCCT 114 L	CO3	•To make students aware of recent advances in Echocardiography.	PO1,PO7, PO8	C,A,P	8	3	10	7.5	13%	7.5	13%	18	20%	1
		CO4	•To understand the role of Cardiac Care technician while assisting the Cardiologist in performing the procedure	PO1,PO7, PO8	C,A,P	5,7,9,11,13	13	43	7.5	13%	7.5	13%	28	31%	2
Semester							30	100%	30	50%	30	50%	90	100%	
3		CO1	Students will become self dependent, more decisive and develop intuitive ability for their study and career related matter.	PO1	C,A	1,2	8	18%		0	0	0	8	9%	1
		CO2	Student's ability to present their ideas will be developed.	PO1	C,A	2,3	7	16%		0	0	0	7	8%	1
		CO3	•Enhanced communication skills, public speaking & improved Presentation ability.	PO1	C,A	3,4	8	18%		0	0	0	8	9%	1
	Pursuit of Inner Self Excellence (POIS)	CO4	• Students will be able to explore their inner potential and inner ability to become a successful researcher or technician & hence become more focused.	PO1	C,A	1,4	7	16%		0	0	0	7	8%	1

		CO5	• Students will observe significant reduction in stress level.	PO1	C,A	2,4	8	18%		0	0	0	8	9%	1
		CO6	• With the development of personal attributes like Empathy, Compassion, Service, Love & brotherhood, students will serve the society and industry in better way with teamwork and thus grow professionally.		C,A	1,3	7	16%		0	0	0	7	8%	1
							45	100%			0	0	45	100%	
		CO1	Describe and apply motivation theories to team and organizational scenarios in order achieve a team's or an organization's goals and objectives.	O1,PO2,PO	C,A	5	6	13%			0	0	6	13%	1
C	Organizational Behavior GEC 002 L	CO2	• Explain the effect of personality, attitudes, perceptions and attributions on their own and other's behaviours in team and organizational settings.	O1,PO2,PO	C,A	4,6,7	19	42%			0	0	19	42%	2
		CO3	• Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyse and apply leadership theories and better understand their own leadership style	O1,PO2,PO	C,A	2,7	8	18%			0	0	8	18%	1
							45	100%			0	0	45	100%	
	Development of	CO1	This course will provide overall information of the structural development of the cardiovascular system.	PO1,PO3, PO4,PO8,	C,A	,2,3,4,5,6,7	35	78%	0	0	0	0	35	78%	3

Caruiovascuiai systeiii. •To encourage student to Fetal and Nonetal BCCT apply this knowledge to 117 L PO1,PO3, CO2 understand developmental C,A 5,6,7,8 10 22% 0 0 10 22% 1 PO4,PO8, anomalies in Cardiovascular System. 45 0 100% 0 45 100% This course will cover PO1 56% CO1 common Cardiovascular ,PO3,PO4, 25 56% 0 0 0 0 25 3 C,A 3,4,5,6,7,8, Diseases, their related PO8 pathology and microbiology. Cardiovascular diseases Along with outline of pertaining to CCT BCCT clinical presentation and 118 L management of these PO1,PO3, 2 CO2 C,A β,4,5,6,7,8, 20 44% 0 0 20 44% conditions it also includes PO4,PO8 Medical and Surgical interventions. 45 100% 45 100% The course is designed to make the student acquire an PO1,PO2, adequate knowledge of the CO1 PO3,PO4, C,A,P 1' -5 20 67% 10 17% 10 17% 30 33% 2 physiological systems of the PO8 human body and relate them Medical Instrumentation to the parameters that have Semester relevant to Cardiac Care clinical importance. 4 **BCCT 119 L** • The fundamental principles CO2 of equipment that are 02,P03,P0 C,A,P 5 17% 10 17% 10 17% 2 17% 15 1 actually in use at the present day are introduced. CO3 The course is designed to mak O2,PO3,PO C,A,P 4, 5 5 17% 17% 10 10 17% 15 17% 1 30 30 50% 100% 30 50% 90 100% Discuss about health informatics and different IT CO₁ PO1,PO8 C,A 11,12 30 67% 0 0 30 29% 1 applications in allied health care. CO2 • Explain the function of PO1,PO8 C,A 9 5 11% 0 5 5% 0 1 **Hospital Information Systems** CO3 PO1,PO8 C,A 10,12 10 22% 0 0 10 10% 1 Computer and applications Analyze medical standards **AEC 003 L** 45 100% 45 100% To understand the CO1 importance & Methodology ,PO3,PO4,I C,A 4,5 20 44% 0 0 20 19% 1 for research

	Biostatistics and Research Methodology AEC 004 L	CO2	• To learn in detail about sampling, probability and sampling distribution, significance tests correlation and regression, sample size determination, study design and multivariate analysis.	L,PO3,PO4,F	C,A	6,7,8	25	55%			0	0	25	24%	1
							45	100%			0	0	45	100%	
		CO1	To develop an understanding regarding Echocardiography.	PO1,PO2, PO3,PO4, PO8	C,A,P	1,2	8	27%	7.5	13%	7.5	13%	15.5	17%	1
	Advanced	CO2	•To train students to perform Electrocardiography examinations by explaining the position of leads.	PO1,PO2, PO3,PO4, PO8	C,A,P	2,3	8	27%	7.5	13%	7.5	13%	15.5	17%	1
	Electrocardiography BCCT 121 L	CO3	•To make students aware of recent advances in Electrocardiography.	PO1,PO2, PO3,PO4, PO8	C,A,P	3,4	8	27%	7.5	13%	7.5	13%	15.5	17%	1
		CO4	•To understand the role of Cardiac Care technician while assisting the Cardiologist as well as when performing individually.	PO1,PO2, PO3,PO4, PO8	C,A,P	5	6	20%	7.5	13%	7.5	13%	13.5	15%	1
							30	100%	30	50%	30	50%	90	100%	
		CO1	To develop an understanding regarding Echocardiography.	PO1,PO2, PO3,PO4, PO8	C,A,P	1,2	7	20%	7.5	13%	7.5	13%	19	21%	1
	Advanced	CO2	•To train students to perform Echocardiography examinations by explaining the position of transducers.	PO1,PO2, PO3,PO4, PO8	C,A,P	2,3	8	20%	7.5	13%	7.5	13%	18	20%	1
Semester 5	Echocardiography BCCT 121 L	CO3	•To make students aware of recent advances in Echocardiography.	PO1,PO2, PO3,PO4, PO8	C,A,P	3,4	7	20%	7.5	13%	7.5	13%	19	21%	1
		CO4	•To understand the role of Cardiac Care technician while assisting the Cardiologist as well as when performing individually.	PO1,PO2, PO3,PO4, PO8	C,A,P	4,5	8	20%	7.5	13%	7.5	13%	18	20%	1

						30	100%	30	50%	30	50%	90	100%	
Invasive Cardiology BCCT 122 L	CO1	ITHOSE HIST STATTING OUT IN THE	PO1,PO2, PO3,PO4, PO8	C,A	1-10.	8	18%					8	18%	1
						45	100%					45	100%	
Basics of Clinical Skill Learning CEC 005 L	CO1	Signs, do basic physical Examination of the patients, NG tube basics, Administration of Medicines	O1,PO2,PO	C,A	1,2,3	23	51%					23	51%	3
	CO2	•The students will learn about Asepsis, and the Cleanliness related to asepsis and on mobility of the patients	O1,PO2,PO	C,A	4,5,6	22	49%					22	48%	2
						45	100%					45	100%	
	CO1	Understand and apply resource management concepts (personnel, finance, and material resources) and the processes and strategies needed in specific hospital sectors.	.,PO2,PO3,F	C,A	1,2	11	24%			0	0	11	10%	1
Hospital Operation Management CEC 006 L	CO2	Communicate effectively and develop their leadership and teambuilding abilities	.,PO2,PO3,F	C,A	2,3	11	24%			0	0	11	10%	1
	CO3	 Apply modern change management and innovation management concepts to optimize structures 	.,PO2,PO3,F	C,A	4,5	11	24%			0	0	11	10%	1

		CO4	•Analyze existing hospital service policies and enhance their alignment within the local and national context	L,PO2,PO3,F	C,A	1,5	12 45	27%			0	0	12 45	11%	1
		CO1	The students will gain knowledge about chances of a successful procedure.	L,PO2,PO3,F	C,A,P	1,2	10	33%	10	17%	10	17%	30	33%	2
Semester 6	Cardiac Catheterization BCCT 124 L	CO2	•To enable students, understand about benefit/risk to the patient if the procedure is successful/ unsuccessful	L,PO2,PO3,F	C,A,P	2,3	10	33%	10	17%	10	17%	30	33%	2
		CO3	•The occurrence and management of various complications.	L,PO2,PO3,F	C,A,P	3,4	10	33%	10	17%	10	17%	30	33%	2
							30	100%	30	50%	30	50%	90	100%	
	Pediatric interventions BCCT 125 L	CO1	The students will gain knowledge through proper assessment and integration of the history, physical examination, electrocardiogram, and chest X-ray, the type of problem can be diagnosed correctly in many patients, and the severity and hemodynamics correctly estimated. •The occurrence and management of various complications in Pediatric cardiology interventions S	O2,PO3,PO	C,A,P	1,2,3	15	50%	15	25%	15	25%	45	50%	2
		CO2	•The occurrence and management of various complications in Pediatric cardiology interventions	O2,PO3,PO	C,A,P	4,5,6	15	50%	15	25%	15	25%	45	50%	2
							30	100%	30	50%	30	50%	90	100	

CO PO MAPPING (Matrix)

Programe - B.Sc Dialysis Care Technology

Semester - Smester III, IV, V & VI

- PO1 Knowledge & Skill Development- An ability to apply knowledge of healthcare technology (including clinical subjects, investigations/ Procedures, handling instruments)
- PO2 Critical Thinking To apply professional judgment and rational thinking in decision-making
- **PO3** Problem solving Correlation of professional knowledge applied to current clinical or healthcare practices.
- PO4 -Professional ethics To adopt and apply code of ethics prescribed by professional bodies in professional and social context. Maintain appropriate boundaries with patients and care givers and maintain confidentiality
- PO5 Communication skills To communicate effectively with the patients, care givers and other healthcare professional for addressing patient related issues and to deliver and information
- PO6 Individual / Team work ability to function on multi-disciplinary teams
- PO 7- Holistic development: Development of intellectual mental, Physical, Emotional & Social abilities, so as to be capable of facing the demands & challenges of every day life.
- PO8 Lifelong learning To develop continuous learning attitude in context of research, advances in clinical practices and to inculcate professionalism and evidence based practices

PO Mapping same with correlation level 3,2,1 The notation of 1 - low, 2 - moderate, 3 - high

				Knowled ge & Skill Develop ment	Critical Thinking	Problem solving	Professio nal ethics	Commun ication skills	Individu al / Team work	Holistic develop ment	Lifelong learning	
Semester	Course / Course Code	Course Outecome	Details	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	
		CO1	Practice personal safety & standard precautions.	3.0	3.0	3.0	1.0	1.0	1.0	1.0	2.0	1.9
	Introduction To Dialysis MDT 112	CO2	Handling complications during dialysis procedures.	3.0	3.0	3.0	1.0	1.0	1.0	1.0	2.0	1.9
	L L	CO3	Understand Infectious diseases, mode of transmission, prevention & care of the patient in a Dialysis Unit.	3.0	3.0	3.0	1.0	1.0	1.0	1.0	2.0	1.9
	Average			3.0	3.0	3.0	1.0	1.0	1.0	1.0	2.0	1.9
		CO1	Practice personal safety & standard precautions.	3.0	3.0	3.0	1.0	1.0	1.0	1.0	2.0	1.9
	Fundamentals of Dialysis BMDT	CO2	Handling complications during dialysis procedures.	3.0	3.0	3.0	1.0	1.0	1.0	1.0	2.0	1.9
	113 L	CO3	Understand Infectious diseases, mode of transmission, prevention & care of the patient in a Dialysis Unit.	3.0	3.0	3.0	1.0	1.0	1.0	1.0	2.0	1.9
	Average			3.0	3.0	3.0	1.0	0.0	0.0	1.0	3.0	1.8
	Pharmacology in Dialysis BMDT	CO1	Understand the basic concepts of pharmacology	3.0	3.0	3.0	2.0	3.0	2.0	2.0	3.0	2.6

CO2 pharmacology of common elementotreppeutics CO2 pharmacology of common elementotreppeutics CO3 antiseptics, disinfectants and insecticides. Understand drug acting on procession CO4 various systems of human body. CO5 Understand alternative systems of medicines. CO5 Students will become self classes CO2 CO5 Students will become self classes CO2 CO5 Students will become self classes CO5 Students ability to present their ideas will be developed their ideas will be developed element their ideas will be developed element their ideas will be developed element CO5 Students will be able to explore their inner potential and inner ability to become a successful researcher or technician & hence become more focused CO5 Students will be developed element CO5 Students will be developed element CO5 Students will be able to explore their inner potential and inner ability to become a successful researcher or technician & hence become more focused CO5 Students will be developed element CO5 Students will be element CO5	ı	114 L		Understand the		1		I		<u> </u>	1	<u> </u>	1
CO3 antisoptics, disinfectants and insecticides. CO4 Insecticides. CO5 Understand furg acting on various systems of human body. CO5 Understand alternative systems of medicines. So So So So So So So S			CO2	pharmacology of common	3.0	3.0	3.0	2.0	0.0	2.0	0.0	3.0	2.0
CO4			CO3	antiseptics, disinfectants and	3.0	3.0	3.0	2.0	3.0	2.0	2.0	3.0	2.6
Average			CO4	various systems of human	3.0	3.0	3.0	2.0	0.0	2.0	0.0	3.0	2.0
Students will be developed intuitive ability for their study and career related matter. 2.0			CO5		3.0	3.0	3.0	2.0	3.0	2.0	2.0	3.0	2.6
CO1 dependent, more decisive and develop intuitive ability for their study and career related matter.		Average			3.0	3.0	3.0	2.0	3.0	2.0	2.0	3.0	2.0
Semester III			CO1	dependent, more decisive and develop intuitive ability for their study and career	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
B.Sc. MDT Semester III Pursuit of Inner Self Excellence (POIS) GEC 001 L CO4 Students will be able to explore their inner potential and inner ability to become a successful researcher or technician & hence become more focused Students will observe significant reduction in stress level. CO6 With the development of personal attributes like Empathy, Compassion, Service, Love & brotherhood, students will serve the society and industry in better way with teamwork and thus grow professionally. CO7 CO8 CO8 CO9 CO9			CO2		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Pursuit of Inner Self Excellence (POIS) GEC 001 L CO4 explore their inner potential and inner ability to become a successful researcher or technician & hence become more focused Students will observe significant reduction in stress level.			CO3	skills, public speaking & improved Presentation	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
CO5 significant reduction in stress 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0		Self Excellence	CO4	explore their inner potential and inner ability to become a successful researcher or technician & hence become	2.0	2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.1
personal attributes like Empathy, Compassion, Service, Love & brotherhood, students will serve the society and industry in better way with teamwork and thus grow professionally. 2.0 2.0 2.0 2.0 2.0 2.0 2.0 1.9			CO5	significant reduction in stress	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Average 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0			CO6	personal attributes like Empathy, Compassion, Service, Love & brotherhood, students will serve the society and industry in better way with teamwork and thus grow	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	1.9
		Average			2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

	CO1	Describe and apply motivation theories to team and organizational scenarios in order achieve a team's or an organization's goals and objectives	1.0	2.0	1.0	1.0	1.0	3.0	1.0	3.0	1.6
Organizational Behavior GEC 002 L	CO2	Explain the effect of personality, attitudes, perceptions and attributions on their own and other's behaviors in team and organizational settings.	1.0	2.0	2.0	1.0	3.0	3.0	1.0	3.0	2.0
	CO3	Explain types of teams and apply team development, team effectiveness, and group decision making models and techniques. Analyze and apply leadership theories and better understand their own leadership style.	1.0	2.0	2.0	1.0	2.0	3.0	1.0	3.0	1.9
Average			2.0	2.0	1.7	1.0	2.0	3.0	1.0	3.0	1.8
Concept of Renal Disease & Disorders BMDT	CO1	To develop understanding regarding different disorder and its management.	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	2.9
116 L	CO2	To develop knowledge in childhood anomalies' and it's significance.	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	2.9
Average			3.0	3.0	0.0	0.0	2.0	0.0	0.0	1.0	1.1
Nutrition in Dialysis BMDT 117 L	CO1	To describe basic nutrient and their role in growth, development, health maintained and restoration.	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	2.9
	CO2	To identify and interpret appropriate dietary plan for dialysis patient.	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	2.9
Average			3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	2.9
		Discuss about health informatics and different IT	2.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.8

Applications AEC 003 L	CO2	Explain the function of	2.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.8
		Hospital Information Systems Analyze medical standards	2.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
	CO3	Analyze medical standards	2.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	
Average			2.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.8
	CO1	To understand the importance & Methodology for research	2.0	2.0	1.0	1.0	1.0	0.0	0.0	2.0	1.1
Biostatistics and Research Methodology AEC 004 L	CO2	To learn in detail about sampling, probability and sampling distribution, significance tests correlation and regression, sample size determination, study design and multivariate analysis.	2.0	2.0	1.0	1.0	1.0	0.0	0.0	2.0	1.1
Average			2.0	2.0	1.0	1.0	1.0	0.0	0.0	2.0	1.1
	CO1	Know the History	3.0	3.0	3.0	3.0	1.0	0.0	1.0	3.0	2.1
	CO2	Describes the anatomy and Physiology	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	CO3	Performs Physiological principles of Dialysis	3.0	3.0	3.0	3.0	1.0	0.0	1.0	3.0	2.1
Applied Dialysis Technology – I BMDT 120 L	CO4	Demonstrated Procedures as Venepuncture, Cannulisation and maintenance of Sterilization of Equipment's and Dialysis Unit	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	CO5	Demonstrate maintenance of Records and Reports	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Average			3.0	3.0	3.0	3.0	2.0	1.5	2.0	3.0	2.6
Advance Dialysis Technology – I	CO1	Practice and perform independently the water maintenance for the Hemodialysis room	3.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0	2.9
BMDT 121 L	CO2	 Independently maintain the Hemodialysis machine with respect to disinfection and priming 	3.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0	2.9
Average			3.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0	2.9

Semester V	Basics of Clinical Skill Learning CEC 005 L	CO1	After successful accomplishment of the course, the students would be able to Measure Vital Signs, do basic physical Examination of the patients, NG tube basics, Administration of Medicines	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	2.9
		CO2	The students will learn about Asepsis, and the Cleanliness related to asepsis and on mobility of the patients	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	2.9
	Average			3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	2.9
		CO1	Understand and apply resource management concepts (personnel, finance, and material resources) and the processes and strategies needed in specific hospital sectors.	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	Hospital Operation Management CEC 006 L	CO2	Communicate effectively and develop their leadership and teambuilding abilities	2.0	2.0	2.0	2.0	3.0	1.0	2.0	2.0	2.0
	000 L	CO3	Apply modern change management and innovation management concepts to optimize structures	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0	1.9
		CO4	Analyze existing hospital service policies and enhance their alignment within the local and national context	2.0	2.0	2.0	2.0	1.0	1.0	2.0	2.0	1.8
	Average			2.0	2.0	2.0	2.0	2.0	1.3	2.0	2.0	1.9
		CO1	Train patients in performing peritoneal dialysis, and personal care.	3.0	3.0	3.0	3.0	2.0	3.0	2.0	2.0	2.6
	Applied Dialysis Technology II BMDT 123 L	CO2	Practice personal safety & standard precautions	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
		CO3	Handling complications during dialysis procedures	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	·	CO4	Maintain quality and safety	3.0	3.0	3.0	3.0	2.0	3.0	2.0	2.0	2.6
	Average			3.0	3.0	3.0	3.0	2.7	3.0	2.7	2.7	2.9

Semester VI		CO1	Demonstrate Knowledge about Advancements in Renal Dialysis and in renal therapies	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Advance Dialysis	CO2	Demonstrate peritoneal dialysis, and its self care	3.0	3.0	3.0	3.0	2.0	3.0	3.0	2.0	2.8
	Technology II BMDT 124 L	CO3	Involves family centered approach while providing patient care	3.0	3.0	3.0	3.0	2.0	3.0	3.0	2.0	2.8
		CO4	Handling complications during dialysis procedures.	3.0	3.0	3.0	3.0	2.0	3.0	3.0	2.0	2.8
	Average			3.0	3.0	3.0	3.0	2.3	3.0	3.0	2.3	2.8

			MAPPING A							
			Programe - B.Sc Dialy	sis Care Tec	chnology			_		
Semester	Subject	PO1	P02	PO3	PO4	PO5	PO6	PO7	PO8	Average
	Introduction To Dialysis	3.0	3.0	3.0	1.0	1.0	1.0	1.0	2.0	1.9
	Fundamentals of Dialysis	3.0	3.0	3.0	1.0	0.0	0.0	1.0	3.0	1.8
Semester 3	Pharmacology in Dialysis	3.0	3.0	3.0	2.0	3.0	2.0	2.0	3.0	2.0
	Pursuit of Inner Self Excellence (POIS)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	Organizational Behavior	2.0	2.0	1.7	1.0	2.0	3.0	1.0	3.0	1.8
	Concept of Renal Disease & Disorders	3.0	3.0	0.0	0.0	2.0	0.0	0.0	1.0	1.1
Semester 4	Nutrition in Dialysis	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	2.9
Semester 4	Computer and Applications	2.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0
	Biostatistics and Research Methodology	2.0	2.0	1.0	1.0	1.0	0.0	0.0	2.0	1.1
	Applied Dialysis Technology – I	3.0	3.0	3.0	3.0	0.5	0.0	0.0	2.0	1.6
	Advance Dialysis Technology – I	3.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0	2.9
Semester 5	Basics of Clinical Skills Learning	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	2.2

2.0 1.9 Hospital Operation 2.0 2.0 2.0 1.6 1.5 2.0 2.5 Management Applied Dialysis 3.0 3.0 2.1 3.0 3.0 1.8 3.0 2.5 2.8 Technology II Advance Dialysis Technology II 3.0 3.0 3.0 1.7 2.6 2.1 3.0 3.0 3.0

Semester 6

	reciniology ii								1						
				CO & P	O Relation	ships (Map	ning Stren	gth)							
						Dialysis Ca	<u> </u>	<u> </u>							
						nester III,									
				CO & PO Relations hips		Unit		cture	L	.ab	Cli	inical	т	otal	Strength Level of CO addressin
Semester	Course & Course code	CO	CO Detail	PO1-PO8	C.A.P	No	Hrs	%	Hrs	%	Hrs	%	Hrs	%	g to PO
		CO1	Practice personal safety & star	1,2,3,8	С	1, 5	17	38%	10	33	10	33	37	82	2
		CO2	Handling complications during	1,2,3	С	2, 4	18	40%	10	33	10	33	38	84	3
	Introduction To Dialysis MDT 112 L	CO3	Understand Infectious diseases, mode of transmission, prevention & care of the patient in a Dialysis Unit.	1,2,3,8	С	3	10	22%	10	33	10	33	30	67	2
	Average						45	100%	30	50	30	50	105	100	
		CO1	Practice personal safety & star	1,2,3,8	С	1,2	15	33%	10	33	10	33	35	33	3
		CO2	Handling complications during	1,2,3,8	С	3,4	10	22%	10	33	10	33	30	29	
	Fundamentals of Dialysis BMDT 113 L	CO3	Understand Infectious diseases, mode of transmission, prevention & care of the patient in a Dialysis Unit.	1,2,3,8	С	4,5	20	44%	10	33	10	33	40	38	
	Average						45	100%	30	50	30	50	105	100	
		CO1	Understand the basic concepts	1,2,3	C.P	3	20	44	0	0	40	40	60	100	3
	Pharmacology in	CO2	Understand the pharmacology		C.P	1,2	25	56	0	0	20	20	45	75	3
	Dialysis BMDT	CO3	Understand common antisepti		tants and in										
	114 L	CO4	Understand drug acting on var												
		CO5	Understand alternative system												
	Average		·				45	100	0	0	60	100	105	100	
		CO1	Students will become self dependent, more dability for their study and career related matter.ecisive and develop intuitive	1,4,5,8	C.A								0	0	
		CO2	Student's ability to present their ideas will be developed.	1,4,8	C.A								0	0	

Semester III Pursuit of Inner Self Excellence CO4 Enhanced communication skills, public speaking & improved Presentation ability. Students will be able to explore their inner potential and inner ability to become a	0	0	
Semester III Pursuit of Inner explore their inner potential explore and inner ability to become a			
Self Excellence (POIS) GEC 001 L CO4 successful researcher or technician & hence become more focused.	0	0	
CO5 Significant reduction in stress 7 A level.	0	0	
With the development of personal attributes like Empathy, Compassion, Service, Love & brotherhood, students will serve the society and industry in better way with teamwork and thus grow professionally.	0	0	
Average	0	0	
Describe and apply motivation theories to team and organization's goals and objectives. Describe and apply motivation theories to team and 4,6 A 1,5 12 27 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 12	20	1
Organizational Behavior GEC 002 L CO2 Explain the effect of personality, attitudes, perceptions and attributions on their own and other's behaviors in team and organizational settings. 4 C.A 2,3,4 20 44 0 0 0 0	0 20	33	2
Explain types of teams and	0 13	22	1
decision making models and techniques.			
CO3 effectiveness, and group 6 C.A 6,7 13 29 0 0 0 0 decision making models and techniques. Average 45 100 0 0	0 45	75	
CO3 effectiveness, and group 6 C.A 6,7 13 29 0 0 0 0 decision making models and techniques. Average		49	3
CO3 effectiveness, and group 6 C.A 6,7 13 29 0 0 0 0 decision making models and techniques. Average 45 100 0 0 0 0 Concept of Renal Disease & CO2 To develop knowledge in child 6,7,8 CAP 6,7,8,9 30 50 8 53 8	0 45		3

	Nutrition in Dialysis BMDT 117 L	CO1	To describe basic nutrient and their role in growth, development, health maintained and restoration.	1,2,3,5,6	С	1,2,3	25	56	0	0	0	0	25	56	3
		CO2	To identify and interpret appropriate dietary plan for dialysis patient.	7,8,9	С	4,5,6	20	44	0	0	0	0	20	44	
	Average						45	100	0	0	0	0	45	100	
Semesterv IV	Computers and Applications AEC 003 L	CO1	Discuss about health informatics and different IT applications in allied health care.	1,8	С	1,2,3,4,5,6 ,7,8	31	69	0	0	0	0	31	52	3
		CO2	Explain the function of Hospital Information Systems Analyze medical standards	4,6	С	9,10,11,12	14	31	0	0	0	0	14	23	1
	Average						45	100	0	0	0	0	45	75	
	Biostatistics and Research Methodology AEC 004 L	CO1	To understand the importance & Methodology for research	1,4,8	С	1,2,3,4	20	44	0	0	0	0	20	33	2
		CO2	To learn in detail about sampling, probability and sampling distribution, significance tests correlation and regression, sample size determination, study design and multivariate analysis.	1	С	5,6,7,8,9	25	56	0	0	0	0	25	42	2
	Average						45	100	0	0	0	0	45	75	
		CO1	Know the History	1,2,6,8	C.A.P	1	10	17	6	10	6	10	22	18	3
	Applied Dialysis Technology – I BMDT 120 L	CO2	Describes the anatomy and Ph		C.A.P	2	8	13	6	10	6	10	20	17	3
		CO3	Performs Physiological principl		CAP	3	8	13	6	10	6	10	20	17	
		CO4	Demonstrated Procedures as Venepuncture, Cannulisation and maintenance of Sterilization of Equipment's and Dialysis Unit	2,4,6,8	САР	4,5	26	43	6	10	6	10	38	32	
		CO5	Demonstrate maintenance of F	1,2,3,5,8	CAP	6,7	8	13	6	10	6	10	20	17	
	Average			, ,-,-,-		-,-	60	100	30	50	30	50	120	100	
	Advance Dialysis	CO1	Practice and perform independently the water maintenance for the Hemodialysis room	1,2,3,5,6	C.A.P	1,2,3	32	53	15	25	15	25	62	52	3

	BMDT 121 L	CO2	Independently maintain the Hemodialysis machine with respect to disinfection and priming	7,8	CAP	4,5,6	28	47	15	25	15	25	58	48	
Semester V	Average						60	100	30	50	30	50	120	100	
		CO1	After successful accomplishment of the course, the students would be able to Measure Vital Signs, do basic physical Examination of the patients, NG tube basics, Administration of Medicines	1,3,5,6,8	C.A.P	1,2,3,4		78	0	0	0	0		0	3
	Basics of Clinical Skill Learning CEC 005 L	CO2	The students will learn about Asepsis, and the Cleanliness related to asepsis and on mobility of the patients	1	C.P	5,6	10	22	0	0	0	0	10	17	1
	Average						45	100	0	0	0	0	45	75	
	Hospital Operation Management CEC 006 L	CO1	Understand and apply resource management concepts (personnel, finance, and material resources) and the processes and strategies needed in specific hospital sectors.	4,6	C.P	2	10	22	0	0	0	0	10	17	1
		CO2	Communicate effectively and develop their leadership and teambuilding abilities	6	C.P	1	5	11	0	0	0	0	5	8	1
		CO3	Apply modern change management and innovation management concepts to optimize structures	4	С	4,5	20	44	0	0	0	0	20	33	2
		CO4	Analyze existing hospital service policies and enhance their alignment within the local and national context	4,6	C	3	10	22	0	0	0	0	10	17	1
	Average			4.0.0 = ==			45	100	0	0	0	0	45	75	
	Applied Dialysis Technology II BMDT 123 L	CO1	Train patients in performing pe	1,2,3,5,6,7 ,8	C.A.P	1,2	16	27	7	12	8	13	31	26	2
		CO2	Practice personal safety & stan		C.A.P	3,4	14	23	8	13	7	12	29	24	3
		CO3	Handling complications during		C.A.P	5,6	20	33	7	12	8	13	35	29	3
		CO4	Maintain quality and safety	2,4,6,8	C.A.P	7	10	17	8	13	7	12	25	21	
1	Average						60	100	30	50	30	50	120	100	

Semester VI	Advance Dialysis Technology II BMDT 124 L	CO1	Demonstrate Knowledge about Advancements in Renal Dialysis and in renal therapies	1,3,5,6	C.A.P	1	10	17	7	12	8	13	25	21	2
		CO2	Demonstrate peritoneal dialysis, and its self care	2,3,4,5,7	C.A.P	2	15	25	8	13	7	12	30	25	1
		CO3	Involves family centered approach while providing patient care	4,7	C.A.P	3	10	17	7	12	8	13	25	21	1
		CO4	Handling complications during dialysis procedures.	7,8	C.A.P	4,5	25	42	8	13	7	12	40	33	
	Average						60	100	30	50	30	50	120	100	