



KHYBER MEDICAL UNIVERSITY

ALLIED HEALTH SCIENCES CURRICULUM

YEAR ONE STUDY GUIDE

(SEMESTER 2)

16 Weeks Activity Planner

2021-22

**CENTRAL CURRICULUM & ASSESSMENT COMMITTEE FOR
NURSING, REHABILITATION SCIENCES & ALLIED HEALTH SCIENCES**



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Introduction

KMU VISION

Khyber Medical University will be the global leader in health sciences academics and research for efficient and compassionate health care.

KMU MISSION

Khyber Medical University aims to promote professional competence through learning and innovation for providing comprehensive quality health care to the nation.

CENTRAL CURRICULUM COMMITTEE

Opened new door, for the beginning of new era under the supervision of Prof Dr. Zia ul Haq, VC Khyber Medical University and Dr. Brekhna Jamil Director IH-PE&R the Central Curriculum & Assessment Committee has been formulated. This is first step taken to change the dynamics of Allied Health Sciences and Nursing Education in Pakistan. Committee by using a craft man approach has developed study guide which will provide pathways for other to follow and KMU will preserve the leadership in providing quality education across Pakistan and will be a reference point of quality in future. Committee has developed curricula to promote inter-professional learning, enhancing and improving the quality of life for people by discovering, teaching and applying knowledge related to Nursing, rehabilitation Sciences & Allied Health sciences.

High-quality education is relevant to patient needs and the changing patterns of skills that are demanded by modern health care and aligning assessment and providing quality training to students will definitely will be the outcome. Which will strengthen and enhance quality of Health System across Pakistan.

The Central Curriculum & Assessment Committee is as follows:

Dr. Brekhna Jamil	Chairperson	Director Institute of Health Professions Education & Research, KMU
Prof. Dr. Zia Ul Islam	Member	Professor ENT
Dr. Syed Hafeez Ahmad	Member	Addl. Controller of Examination Khyber Medical University
Dr. Danish Ali Khan	Member	Director/ Principal Northwest Institute of Health Sciences
Sardar Ali	Member	Assistant Professor Institute of Nursing Khyber Medical University
Muhammad Asif Zeb	Member	Lecturer Institute of ParaMedical Sciences Khyber Medical University
Nazish A Qadir	Member	Lecturer Institute of Physical Medicine & Rehabilitation Khyber Medical University
Syed Amin Ullah	Secretary	Assistant Director Academics Khyber Medical University



INTRODUCTION

Allied Health Sciences deal with all kind of diagnostic techniques used in the medical sector and are very crucial for the treatment of the patients. With diagnosis depending on technology, the role of allied health professional has become vital for delivering successful diagnostic and therapeutic. The allied health professionals include Medical laboratory technologists, Dental, Radiology, Anesthesia, Cardiology, Cardiac perfusion, Surgical, renal dialysis and Emergency technologists. Their role is to use scientific principles and evidence-based practice for the diagnosis, evaluation and treatment of various disorder; prevention of diseases, and to promote health of the community. In addition, it also deal with the application of administration and management skills.

OBJECTIVES

By the end of this program, students should be able to:

- 1. To prepare a cadre of health technologists and workers who can effectively assist senior health professionals in the delivery of quality health services.**
- 2. To prepare paramedical workers for all levels of the health care delivery system from the primary to the tertiary level.**
- 3. To introduce and impart standard technical education with new modern techniques, within the fields of medical technologies, by replacing the conventional methods of pre-service training (certificate level).**
- 4. To provide paramedical workers a status and recognition in the health care delivery system through improving their capacity along with increasing awareness of their responsibilities, authority and job description.**
- 5. To equip paramedical staff with modern skills and latest technical knowledge and bring them at par with other national and international level.**

SECOND SEMESTER SUBJECTS

S.No	Subjects	Duration
1	PMS-607 MEDICAL BIOCHEMISTRY-II 4 (3-1)	16 weeks
2	PMS-608 HUMAN PHYSIOLOGY-II 4 (3-1)	16 weeks
3	PMS-609 HUMAN ANATOMY-II 4 (3-1)	16 weeks
4	PMS-610 ENGLISH-II 2(2-0)	16 weeks
5	PMS-611 ISLAMIC STUDIES 2(2-0)	16 weeks



2nd Semester

PMS-607 MEDICAL BIOCHEMISTRY-II 4 (3-1)

Course Description

The course "Medical Biochemistry-II" provides an introduction to major metabolic pathways and bioenergetics, including metabolism of carbohydrates, proteins, lipids and nucleotides. It will also cover the importance and use of enzymes in the hospital and clinical setups and part of nutrition.

Cognitive Domain

By the end of this subject, students should be able to:

1. Describe the synthesis of proteins and their role in metabolic pathways along with their regulation.
2. Discuss the synthesis of lipids and its metabolic pathways
3. Explain the synthesis of lipids and its metabolic pathways along with their regulation.
4. Describe the synthesis and regulation of nucleic acids
5. Discuss carbohydrates and their role in metabolic pathways along with their regulation
6. Discuss the clinical role of enzymes in human beings
7. Interpret and apply nutritional concepts to evaluate and improve the nutritional health of individuals with medical conditions.

Skills Domain

By the end of this subject, students should be able to:

1. Demonstrate selection of tubes and their preservative for blood tests
2. Demonstrate procedure & parts of water bath
3. Perform the procedure of blood collection technique
4. Perform estimation of glucose, cholesterol and uric acid by spectropho-

tometric method

5. Perform the Ketone body estimation in urine through step method
6. Perform interpretation of Various nutrients

Affective Domain

By the end of this subject, students should be able to:

1. Demonstrate punctuality.
2. Follow the specified norms of the IL, SGD teaching & learning.
3. Demonstrate the humbleness and use the socially acceptable language during academic and social interactions with human models, colleagues and teachers.
4. Demonstrate ethically competent decisions when confronted with an ethical, social or moral problem in professional or personal life.

TOS -PMS-607 MEDICAL BIOCHEMISTRY-II 4 (3-1)

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
TOPIC: METABOLISM										
1	Week-1	Definition	Define metabolism	C1			Interactive Lecture/SGD	3	MCQ's	5
2		Types of metabolism	Explain types of metabolism	C2						
3		Practical	Demonstrate tube selection & preservative for blood tests independantly			P4		2	OSPE	5
4			Comply to SOP of tube management affectively			A4	Role Play			
TOPIC: CATABOLIC PROCESS CARBOHYDRATE METABOLISM										
5	Week-2	Glycolysis	Describe glycolysis pathway of carbohydrate metabolism	C2			Interactive Lecture/SGD	3	MCQ's	5
6		Glycogenolysis	Explain glycogenolysis pathway of carbohydrate metabolism	C2						
7		Pentose Phosphate Pathway	Describe pentose phosphate pathway of carbohydrate metabolism	C2						
8		Practical	Perform Preparation of reagents and estimation of glucose			P4		2	OSPE	5
9			Comply to SOP of Practical affectively			A4	Role Play			
10	Week-3	Rapoport Lubering shunt	Describe glycolysis pathway in Red Blood Cells (RBCs)	C2			Interactive Lecture/SGD	3	MCQ's	5
11		Krebs cycle	Explain kreb cycle of carbohydrate metabolism	C2						
12		Electron transport chain	Describe the electron transport chain an energy harvesting pathway of carbohydrate metabolism	C2						
13		Practical	Video Demonstrate of electron tranport chain			P3		2	OSPE	5
14			Comply to SOP of Practical affectively			A3	Role Play			
15	Week-4	Cori cycle	Explain the pathway of Cori cycle	C2			Interactive Lecture/SGD	3	MCQ's	5
16		Chemical rationale	Discuss the chemical rationale of each reaction/step of Carbohydrate metabolism	C2						
17		Practical	Demonstrate procedure & parts of water bath independently			P4		2	OSPE	5
18			Comply to SOP to water bath			A4	Role Play			
TOPIC: ENERGY CALCULATION										
19	Week-5	ATP calculation	Calculate how much ATPs are produced by complete oxidation of one molecule of glucose	C2			Interactive Lecture/SGD	3	MCQ's	5
20		Practical	Perform the procedure of blood collection technique independently			P4		2	OSPE	5
21			Comply to blood taking SOP			A4	Role Play			

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items	
				C	P	A					
TOPIC: ANABOLIC PROCESS CARBOHYDRATE METABOLISM											
22	Week-6	Gluconeogenesis	Describe the process of Gluconeogenesis in human body	C2			Interactive Lecture/SGD	3	MCQ's	5	
23		Glycogenesis	Explain the process of Glycogenesis	C2							
24		Practical	Video Demonstration of Gluconeogenesis & Glycogenesis	Comply to SOP of Practical affectively		P4		Demo	2	OSPE	5
25							A4	Role Play			
26	Week-7	Regulation	Explain the regulation of the metabolic pathways of carbohydrates	C2			Interactive Lecture/SGD	3	MCQ's	5	
27		Practical	Perform estimation of glucose by spectrophotometric method independently	Comply to SOPs of instrument, properly operate the instrument and keep working bench clean		P4		Demo	2	OSPE	5
28							A4	Role Play			
TOPIC: PROTEIN AND AMINO ACID METABOLISM											
29	Week-8	Metabolic pathways of amoni acids	Describe the metbolic pathway of amino acids	C2			Interactive Lecture/SGD	3	MCQ's	5	
30		Amonia synthesis	Describe how ammonia synthesized and excreted from body	C2							
31		Practical	Video Demonstration of ammonia systhesis	Comply to SOP of Practical affectively		P4		Demo	2	OSPE	5
32							A4	Role Play			
33	Week-9	Urea Cycle	Define Urea	C1			Interactive Lecture/SGD	3	MCQ's	5	
34			Explain reaction of urea cycle	C2							
35			Explain exceation of urea	C2							
36		Practical	Perform estimation of Urea by spectrophotometric method independently	Comply to SOPs of instrument , properly operate the instrument and keep working bench clean		P4		Demo	2	OSPE	5
37							A4	Role Play			
TOPIC: LIPIDS METABOLISM											
38	Week-10	Oxidation of fatty acids	Describe metabolic pathways of lipid metabolism	C2			Interactive Lecture/SGD	3	MCQ's	5	
39		Beta oxidation	Explain beta oxidation of lipids	C2							
40		Practical	Perform the Ketone body estimation in urine through step method	Comply to SOP of Practical affectively		P4		Demo	2	OSPE	5
41							A4	Role Play			

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
42	Week-11	Steps of beta oxidation	Enist reactions of the beta oxidation pathway	C2			Interactive Lecture/SGD	3	MCQ's	5
43		ATP calculation	Calculate how much ATPs are produced by complete oxidation of one fatty acid molecule	C2						
44		Practical	Perform the procedure of estimation of cholesterol estimation by spectrophotometric method independently		P4		Demo	2	OSPE	5
45			Comply to SOPs of instrument , properly operate the instrument and keep working bench clean			A4	Role Play			
TOPIC: NUCLEOTIDE METABOLISM										
46	Week-12	de nove and salvage pathways of nucleotide synthesis	Explain how purine nucleotides are synthesized in the body	C2			Interactive Lecture/SGD	3	MCQ's	5
47		Catabolism of purines	Discuss structure and nomentclature of protein	C2						
48			Discuss structure and nomentclature of aminoacids	C2						
49		Practical	Perform protein estimation in urine		P4		Demo	2	OSPE	5
50			Comply to SOP of Practical affectively			A4	Role Play			
51	Week-13	Purine catabolism	Explain how purine nucloetides are catabolized in the body	C2			Interactive Lecture/SGD	3	MCQ's	5
52		Uric acid synthesis and elimination	Describe uric acid production and elimination from body	C2						
53		Practical	Perform uric acid estimation by spectrophotometric method		P4		Demo	2	OSPE	5
54			Comply to SOPs of instrument , properly operate the instrument and keep working bench clean			A4	Role Play			
TOPIC: NUTRITION										
55	Week-14	Definition	Define nutrients and nutrition	C2			Interactive Lecture/SGD	3	MCQ's	5
56		Nutrient groups	Explain the essential nutrient groups	C2						
57		Balanced diet	Describe balance diet for human body	C2						
58		Nutritional importance biomolecules	Describe nutritional value of carbohydrates, proteins and lipids	C2						
59		Practical	Perform interpretation of Various nutrients (Iron, Bcomplex , Folate)		P3		Demo	2	OSPE	5
60			Comply to SOP of Practical affectively			A4	Role Play			

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
61	Week-15	Anorexia, Obesity	Discuss eating disorders in human body	C2			Interactive Lecture/SGD	3	MCQ's	5
62		Malnutrition	Explain malnutrition with focus on Protein energy malnutrition, Kwashiorkor, Marasmus	C2						
63		Practical	Video Demonstration of oral glucose tolerance test		P3		Demo	2	OSPE	5
64			Comply to SOP of Practical affectively			A4	Role Play			
TOPIC: CLINICAL ENZYMOLOGY										
65	Week-16	Definition	Define clinical/ diagnostic enzymology	C2			Interactive Lecture/SGD	3	MCQ's	5
66		factors effecting enzymes	Explain factors affecting Enzymes activity	C2						
67		Clinical significance of ALT,AST,ALP,GGT,LD-H,CK,Lipase,amylase.	Describe clinical significance of enzymes	C2						
68		Practical	Perform serum ALT estimation by spectrophotometric method		P4		Demo	2	OSPE	5
69			Comply to SOPs of instrument , properly operate the instrument and keep working bench clean			A4	Role Play			

PMS-608 HUMAN PHYSIOLOGY-II

4 (3-1)

Course Description

The purpose of this course is to equip the students by imparting knowledge and understanding of the Fundamentals of human Physiology, to foster the development of professional skills through this curriculum by understanding the essential principles underlying how the human body functions, and see how this knowledge comes into play in real-world scenarios and in clinical settings. For this curriculum is designed in such a way to get insight of basics and explanations of physiological processes and functioning different body system including nervous system, cardiovascular system , blood, lymphatic system and special senses.

Cognitive Domain

By the end of this subject, students should be able to:

1. **Discuss a systematic and coherent knowledge of the physiological functioning of the central nervous system, special senses (CNS & SS), cardiovascular system and respiratory system.**
2. **Describe the formation of the formed element components of blood**
3. **Identify the components and function of the lymphatic system**
4. **Discuss the role of the immune response against pathogens**

Skills Domain

By the end of this subject, students should be able to:

1. **Demonstrate ability to Identify and label different system**
2. **Demonstrate the superficial and deep reflexes**
3. **Demonstrate function principal of nerve stimulator**
4. **Demonstrate the working of special senses**
5. **Perform examination of BP and pulse**
6. **Perform and interpret CBC, TLC, ESR and DLC**

7. **Study of Microscope and use the microscope to look slides effectively.**
8. **Examination of different system of body on models/charts.**

Affective Domain

By the end of this subject, students should be able to:

1. **Demonstrate punctuality.**
2. **Follow the specified norms of the IL, SGD teaching & learning.**
3. **Demonstrate the humbleness and use the socially acceptable language during academic and social interactions with human models, colleagues and teachers.**
4. **Demonstrate ethically competent decisions when confronted with an ethical, social or moral problem related to professional or personal life.**

TOS -PMS-608 HUMAN PHYSIOLOGY-II 4 (3-1)

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
TOPIC: NERVOUS SYSTEM										
1	Week-1	Nervous system introduction	Explain the Nervous system	C2			Interactive Lecture/SGD	3	MCQ's	5
2			Discuss the anatomical and physiological division of nervous system	C2						
3			Explain the structure and function of central nervous system	C2						
4			Explain the structure and function of peripheral nervous system	C2						
5		Action potential	Explain the action potential and resting membrane potential	C2						
6			Discuss the miniature end plate potential	C2						
7			Describe the Local and action potential	C2						
8		Neuron	Define Neuron.	C1						
9			Explain the Structure of neuron	C2						
10			Describe the classification of neuron and nerve fiber	C2						
11		Meninges, CSF, ventricles	Explain the function of Meninges and CSF	C2						
12	Practical	label the function and division of nervous system on model/ charts		P4		Demo	2	OSPE	5	
13		Adopt how to care and handle Models and charts			A4	Role Play				
14	Week-2	Neuroglia	Define Neuroglia	C1			Interactive Lecture/SGD	3	MCQ's	5
15			Explain the classification of neuroglia	C2						
16			Describe the function of neuroglia	C2						
17		Receptors	Define the Receptor	C1						
18			Explain the classification of receptors	C2						
19			Discuss the properties of receptors	C2						
20		Synapse	Define the Synapses	C1						
21			Explain the classification of synapses	C2						
22			Discuss the properties of synapses	C2						
23			Decribe the functions of synapse	C2						
24		Practical	Label Structure and function of receptor and synapses on model & Charts		P4					
25	Adopt how to care and handle Models and charts				A4	Role Play				



S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
26	Week-3	Neurotransmitter	Define the neurotransmitter	C1			Interactive Lecture/SGD	3	MCQ's	5
27			Explain classification of neurotransmitter	C2						
28			Discuss the Neuromodulators	C2						
29		Reflex activity	Explain the Reflex activity and Reflex arc	C2						
30			Discuss the component of reflex arc	C2						
31		Practical	Demonstrate the superficial and deep reflexes independently		P4					
32	Adopt how to use and take care of instruments used in superficial and deep reflexes				A4	Role Play				
33	Week-4	Cranial and spinal nerves	Explain the function of spinal nerves	C2			Interactive Lecture/SGD	3	MCQ's	5
34			Explain different types of cranial nerves	C2						
35			Discuss function of each cranial nerve	C2						
36		Somatic system	Explain the somatosensory system	C2						
37			Explain the Somatomotor system	C2						
38		Autonomic nervous system	Describe the Sympathetic nervous system	C2						
39			Describe the Para sympathetic nervous system	C2						
40		Physiology of pain	Discuss the components of pain sensation	C2						
41			Describe the types of pain sensation	C2						
42			Discuss the pathways of pain sensation.	C2						
43			Explain the benefits of pain sensations	C2						
44	Practical	Demonstrate function principal of nerve stimulator		P4		Demo	2	OSPE	5	
45		Adopt how to use and take care of instruments used in nerve stimulator			A4	Role Play				

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
TOPIC: SPECIAL SENSES										
46	Week-5	Sense of Vision	Explain the structure of eye	C2			Interactive Lecture/SGD	3	MCQ's	5
47			Decribe the layer of eye wall	C2						
48			Discuss the structure inside the eyeball	C2						
49			Expalain the sensory receptor cells in eye	C2						
50			Explain the visual poces	C2						
51			Explain the visual pathway	C2						
52		Sense of hearing	Decribe the structure of ear	C2						
53			Discuss parts of ear	C2						
54			Explain the function of external ear	C2						
55			Explain the function middle ear	C2						
56			Explain the function of internal ear	C2						
57			Decribe the auditory pathway	C2						
58			Discuss the mechanism of hearing	C2						
59			Illustrate the mechanism of balance maintaince by ears	C2						
60	Practical	Demonstrate the working of ear and eye		P4		Demo	2	OSPE	5	
61		Comply to SOPs of examination			A4	Role Play				
62	Week-6	Sense of taste	Define taste buds	C1			Interactive Lecture/SGD	3	MCQ's	5
63			Explain situation of taste buds	C2						
64			Explain structure and function of taste buds	C2						
65			Describe the Pathway for taste	C2						
66			Explain the primary taste sensation	C2						
67		Sense of smell	Define olfaction	C1						
68			Explain the olfactory receptors	C2						
69			Discuss the vomeronasal organ in human	C2						
70			Decribe the pathway for olfaction	C2						
71			Discuss the olfactory transduction	C2						
72		Practical	Label the pathway of olfactory system and taste buds on charts		P4					
73	Adopt how to care and handle Models and charts				A4	Role Play				



S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items				
				C	P	A								
TOPIC: BLOOD PHYSIOLOGY														
74	Week-7	Body fluid	Discuss the significance of body fluid	C2			Interactive Lecture/SGD	3	MCQ's	5				
75			Explain the body fluid compartments	C2										
76			Describe the concentration of body fluids	C2										
77		Blood	Explain the composition of blood plasma	C2										
78			Discuss the function of blood	C2										
79		Hematopiosis	Explain the Hematopiosis	C2										
80			Discuss the Erythropiosis	C2										
81			Describe the Leukopiosis	C2										
82			Explain the thorombopiosis	C2										
83			Discuss the factor responsible of Hematopiosis	C2										
84	Practical	Interpret reports of CBC and TLC		P4		Demo	2	OSPE	5					
85		Adopt how to care and handle Models and charts			A4	Role Play								
86	Week-8	Red blood cell	Explain the morphology and properties of RBC	C2			Interactive Lecture/SGD	3	MCQ's	5				
87			Discuss the function of RBC	C2										
88			Describe the variation in number, size, shape and structure of RBC	C2										
89			Discuss the structure of hemoglobin	C2										
90		White blood cells	Explain the classification of WBC	C2										
91			Discuss the morphology of WBC	C2										
92			Explain variation in WBC Count, Properties of WBC	C2										
93			Explain the function and properties of WBC	C2										
94		Practical	Perform bleeding and clotting time independently		P4						Demo	2	OSPE	5
95			Comply to SOPs of examination			A4					Role Play			

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
96	Week-9	Homeostasis	Define homeostasis	C4			Interactive Lecture/SGD	3	MCQ's	5
97			Explain the stages of homeostasis,							
98			List of coagulation factors							
99			Decribe the sequence of coagulation mechanism							
100			Discuss the clot retraction and fabrinyolysis,							
101		Blood groups	Define blood grouping ,							
102			Explain the ABO blood group system ,							
103			Explain the importance of ABO blood groups in transfusion							
104			Discuss the Rh Factor							
105		Practical	Perform the procedure of ESR		P4					
106	Comply to SOPs of examination				A4	Role Play				
TOPIC: CARDIOVASCULAR SYSTEM										
107	Week-10	Introduction to car-diovas- cular system	Explain the function of CVS	C2			Interactive Lecture/SGD	3	MCQ's	5
108			Explain the arterial and venous system	C2						
109			Discuss the division of circulation pulmonary and systemic circulation	C2						
110		Physiology of heart	Explain the structure of heart	C2						
111			Explain Layers of wall of heart	C2						
112			Explain the action of heart	C2						
113			Discuss properties of cardiac muscles	C2						
114		Cardiac cycle	Explain the cardiac cycle	C2						
115			Discuss the events of cardiac cycle	C2						
116			Decribe the physiological changing during each periods of cardiac cycle	C2						
117	Practical	Label structure and function of heart on model and charts		P4		Demo	2	OSPE	5	
118		Adopt how to care and handle Models and charts			A4	Role Play				



S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
119	Week-11	Heart sound	Discuss the heart sounds	C2			Interactive Lecture/SGD	3	MCQ's	5
120			Explain different types of heat sound	C2						
121			Discuss methods of studying heart sounds	C2						
122		Cardiac output	Explain the cardiac output	C2						
123			Discuss the Stroke volume	C2						
124			Describe the heart rate	C2						
125			Explain the Minute volume	C2						
126			Discuss the cardiac index	C2						
127			Explain the Variation in cardiac output	C2						
128			Describe the factor maintenance cardiac output	C2						
129			Discuss the measurements of cardiac output	C2						
130		Practical	Perform auscultation heart sounds		P4					
131	Comply to SOPs of examination				A4	Role Play				
132	Week-12	Blood pressure	Define blood pressure	C2			Interactive Lecture/SGD	3	MCQ's	5
133			Explain the regulation of blood pressure	C2						
134			Discuss the short term and long term regulation of blood pressure	C2						
135			Explainthe structure and function of blood vessels	C2						
136		ECG	Define Conducive system of heart	C1						
137			Explain the Part of conductive system	C2						
138			Discuss the properties of conductive system	C2						
139			Define electrocardio graphy	C1						
140			Decribe different in electrocardiogram and graph	C2						
141			Eplain classification ECG Leads and placement of ECG leads	C2						
142			Discuss the description of waves and segments in basic ECG	C2						
143		Practical	Interpretation of Normal ECG Strip		P4					
144	Adopt how to care and handle Models and charts				A4	Role Play				

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items			
				C	P	A							
145	Week-13	Arterial Circulation	Explain Systemic Circulation	C2			Interactive Lecture/SGD	3	MCQ's	5			
146		Venous Circulation	Describe Pulmonary Circulation	C2									
147		Capillary Circulation and Exchange of Materials	Explain the Capillary circulation	C2									
148		Conduction system of the heart	Explain Conduction system	C2									
149		Practical	Demonstrate the examination of BP and Pulses independently		P4		Demo	2	OSPE				
150			comply to SOP for the procedure			A4	Role Play						
TOPIC: LYMPHATIC SYSTEM													
151	Week-14	Lymphatic system	Define lymphatic system	C1			Interactive Lecture/SGD	3	MCQ's	5			
152			Explain the organization of lymphatic system	C2									
153			Discuss the lymph nodes	C2									
154			Explain the structure and function of lymph node	C2									
155			Explain the formation of lymph	C2									
156			Explain the composition and function of lymph	C2									
157			Explain the lymphatic circulation	C2									
158		Spleen	Discuss the structure of spleen	C2									
159			Explain the red pulp and white pulp	C2									
160			Describe the function of spleen	C2									
161		Thymus	Discuss the structure and function of thymus	C2									
162			Discuss the location of thymus	C2									
163		Practical	Identify various sites of Lymph nodes independently		P4						Demo	2	OSPE
164			Adop how to take care of models			A4					Role Play		

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/ Hours	Assesment	No of Items		
				C	P	A						
TOPIC: IMMUNE SYSTEM												
165	Week-15	Immunity	Define immunity	C1			Interactive Lecture/SGD	3	MCQ's	5		
166			Define innate immunity	C1								
167			Explain the types of immunity	C2								
168			Explain the mechanism of innate immunity	C2								
169			Define acquired immunity	C1								
170			Explain the types of acquired immunity	C2								
171			Discuss the mechanism of acquired immunity	C2								
172			Discuss the development and processing of lymphocytes	C2								
173			Practical		Identification of various component of lymphatic system using charts and models						P4	
174	Adopt how to care and handle Models and charts					A4	Role Play					
175	Week-16	Immunity	Define antigen	C1			Interactive Lecture/SGD	3	MCQ's	5		
176			Explain the types of antigen	C2								
177			Discuss the development of cell mediated immunity	C2								
178			Explain the development of humoral immunity	C2								
179			Define antibody	C1								
180			Explain types of antibody	C2								
181			Explain the function and mechanism of antibody	C2								
182			Immunization		Discuss Immunization in detail	C2						
183					Explain the types of immunization	C2						
184	Explain the role of blood in immunity	C2										
185	Differentiate various WBCs that plays role in immune sysem independently	C4										
186	Practical		Perform the procedure of DLC independently		P4		Demo	2	OSPE	5		
187			Comply to SOPs of examination			A4	Role Play					

PMS-609 HUMAN ANATOMY-II

4 (3-1)

Course Description

Students are been able to identify bones of the upper limb and bony landmarks that articulate at each joint with all muscular compartments of the upper limb. Discuss bones of the lower limb and bony landmarks that articulate at each joint with all muscular compartments of the lower limb and identify these structures on radiographic images. Describe the topographical and functional anatomy of the head and neck, in particular the arrangement, relations and structure of the major skeletal, muscular and neurovascular components of the head and neck.

Cognitive Domain

By the end of this subject, students should be able to:

1. Describe the topographical and functional anatomy of the head and neck
2. Discuss the arrangement, relations and structure of the major skeletal, muscular and neurovascular components of the head and neck
3. Identify bones of the upper limb and bony landmarks that articulate at each joint with all muscular compartments of the upper limb.
4. Discuss bones of the lower limb and bony landmarks that articulate at each joint with all muscular compartments of the lower limb
5. Identify upper and lower limb structures on radiographic images.

Skills Domain

By the end of this subject, students should be able to:

1. Identify all the accessory parts of head, neck and extremities from human Models and charts.
2. Demonstrate the bony orientation of upper limb and lower limb.
3. Identify different joints, surfaces marking of upper and lower extremities.

Affective Domain

By the end of this subject, students should be able to:

1. Demonstrate punctuality.
2. Follow the specified norms of the IL, SGD teaching & learning.
3. Demonstrate the humbleness and use the socially acceptable language during academic and social interactions with human models, colleagues and teachers.
4. Make ethically competent decisions when confronted with an ethical, social or moral problem related to professional or personal life.

TOS -PMS-609 HUMAN ANATOMY-II 4 (3-1)

S.No	Weeks	Content	Learning Outcomes	Domain			MIT's	Hours	Assesment	No of Items
				C	P	A				
TOPIC: SKULL BONES/ SCALP										
1	Week-1	Scalp	Describe layers of scalp	C2			Interactive Lecture/SGD	3	MCQ's	5
2			Explain the vascular supply of scalp	C2						
3			Explain the nerve supply of scalp	C2						
4			Explain the applied aspect of scalp	C2						
5		Bone, sutures, surface land marks	Explain the basic anatomy of skull bones	C2						
6		Sutures	Describe the sutures	C2						
7		land marks	Explain the exterior and interior of skull	C2						
8		Skull Bones	Explain the land marks of frontal and occipital bone	C2						
9			Explain the land marks of maxilla	C2						
10			Describe the sphenoid and temporal bones	C2						
11			Explain the Foetal skull	C2						
12			Describe the hyoid bone	C2						
13	Practical	Identify the bony landmarks of skull bones from Models and charts		P4		Demo	2	OSPE	5	
14		Identify the bony landmarks of skull sutures from Models and charts		P4						
15		Adopt how to care and handle Models and charts			A					Role Play
16	Week-2	Cranial cavity	Discuss the internal and external bony table folds of dura mater	C2			Interactive Lecture/SGD	3	MCQ's	5
17			Discuss apex and base of skull	C2						
18			Discuss vacular supply of the bony skull	C2						
19		Meninges	Explain the structure of meninges	C2						
20	Discuss the types of meningeal layers		C2							
21	Practical	Identify the bony landmarks of base of skull from Models and charts		P4		Demo	2	OSPE	5	
22		Adopt how to care and handle Models and charts			A					Role Play

S.No	Weeks	Content	Learning Outcomes	Domain			MIT's	Hours	Assesment	No of Items
				C	P	A				
23	Week-3	Brain	Explain the structure of brain	C2			Interactive Lecture/SGD	3	MCQ's	5
24			Explain Parts of brain	C2						
25			Discuss the regions of the brain	C2						
26		Practical	Identify the landmarks of brain from Models and charts		P4		Demo	2	OSPE	5
27			Adopt how to care and handle Models and charts			A	Role Play			
28	Week-4	Brain	Explain Vascular supply of the brain	C2			Interactive Lecture/SGD	3	MCQ's	5
29			Discuss Nerve supply of the brain	C2						
30		Cerebrospinal fluid	Discuss the structure and function of ventricles	C2						
31			Explain the production and flow of CSF	C2						
32		Practical	Identify the landmarks vessels of brain and CSF from Models and charts		P4		Demo	2	OSPE	5
33			Adopt how to care and handle Models and charts			A	Role Play			
34	Week-5	Cranial nerve	Explain the functional components, course, branches, distributions of cranial nerve with its applied aspect	C2			Interactive Lecture/SGD	3	MCQ's	5
35			Discuss the relations of cranial nerve	C2						
36		Spinal cord	Explain the structure of Spinal cord	C2						
37			Describe the spinal nerves	C2						
38		Practical	Identify the landmarks cranial nerve and spinal cord from Models and charts		P4		Demo	2	OSPE	5
39			Adopt how to care and handle Models and charts			A	Role Play			
40	Week-6	Face	Describe Facial bones and muscles	C2			Interactive Lecture/SGD	3	MCQ's	5
41			Explain the vascular supply of face	C2						
42			Explain the nerve supply of face	C2						
43		Temporomandibular joint	Discuss the temporomandibular joint	C2						
44		Sinuses	Explain the structure and function of Sinuses	C2						
45		Practical	Label Facial bone on bone/ Models/ Chart		P4		Demo	2	OSPE	5
46	Adopt how to care and handle Models and charts				A	Role Play				



S.No	Weeks	Content	Learning Outcomes	Domain			MIT's	Hours	Assesment	No of Items				
				C	P	A								
47	Week-7	Orbit	Explain the structure of Orbit	C2			Interactive Lecture/SGD	3	MCQ's	5				
48		Eye	Discuss Structure and function of eye	C2										
49		lacrimal apparatus	Describe the Parts of lacrimal apparatus	C2										
50		lacrimal gland	Explain the struture of lacrimal gland anatomy	C2										
51		Teeth	Explain the types of teeth	C2										
52			Explain the structure of teeh	C2										
53		Ear	Explain the parts of Ear	C2										
54			Explain the bony Ear	C2										
55			Discuss the struture of tympanic membrane	C2										
56			Explain middle ear cavity its boundaries and relations	C2										
57			Describe vascular supply of ear	C2										
58			Describe nerve supply of ear	C2										
59		Practical	Label orbit on bone/ Models/ Chart		P4						Demo	2	OSPE	5
60			Adopt how to care and handle Models and charts			A					Role Play			
TOPIC: ORAL CAVITY														
61	Week-8	Palate	Discuss bony and soft Palate	C2			Interactive Lecture/SGD	3	MCQ's	5				
62		Pharynx	Discuss naso, oro and layngo pharynx and their relations, muscles	C2										
63			Discuss the muscles of pharynx	C2										
64			Discuss the nerve supply of pharynx	C2										
65		Tonsils and auditory tube	Explain Features and relations of tonsils and auditory tube with applied anatomy	C2										
66		Larynx	Discuss the cartilages and structures Larynx	C2										
67			Discuss the muscles of Larynx	C2										
68			Explain the structure of glottis and epiglottis	C2										
69			Explain the movements of vocal cords	C2										
70		Practical	Label orbit on nasal and buccal cavity on / Models/ Chart		P4						Demo	2	OSPE	5
71			Adopt how to care and handle Models and charts			A					Role Play			

S.No	Weeks	Content	Learning Outcomes	Domain			MIT's	Hours	Assesment	No of Items
				C	P	A				
TOPIC: NECK										
72	Week-9	Neck Bone	Explain structure and function of Neck bones	C2			Interactive Lecture/SGD	3	MCQ's	5
73			Difference between typical and Atypical vertebrae	C2						
74			Explain muscles of Neck Bone	C2						
75			Describe Ligament of Neck bones	C2						
76			Explain suboccipital triangle boundaries and its contents	C2						
77			Describe sub occipital plexus of vein	C2						
78			Deep Cervical Fascia	Describe the pre vertebral fascia	C2					
79		Describe the carotid sheath and its applied aspect		C2						
80		Explain the Pharyngeal spaces		C2						
81		Discuss the relations of all cervical fascia		C2						
82		Anterior & Posterior triangle of neck	Explain subdivision, boundaries & contents of Posterior Triangle	C2						
83			Discuss the origin, insertion, nerve supply and action sternocleido mastoid muscle.	C2						
84			Discuss the relations of sternocleidomastoid	C2						
85			Explain Anterior triangle of neck, sub divisions, boundaries and its contents	C2						
86			Discuss the supra & infra hyoid muscles	C2						
87			Discuss the origin & insertion of supra & infra hyoid muscles	C2						
88			Explain the cervical plexus	C2						
89		Practical	Label Neck bones on bone/ Models/ Chart		P4					
90	Adopt how to care and handle Models and charts				A	Role Play				



S.No	Weeks	Content	Learning Outcomes	Domain			MIT's	Hours	Assesment	No of Items				
				C	P	A								
TOPIC: GLANDS														
91	Week-10	Parotid gland/ Sub lingual	Explain the location and relations of parotid and Sub lingual gland	C2			Interactive Lecture/SGD	3	MCQ's	5				
92			Discribe the vascular supply of parotid and Sub lingual gland	C2										
93			Discuss the nerve supply of parotid and Sub lingual gland	C2										
94		Submandibular gland	Discribe the vascular supply of Submandibular gland	C2										
95			Discuss the nerve supply of Submandibular gland	C2										
96		Thyroid gland	Discuss location and relations thyroid gland with applied aspect	C2										
97			Discuss vascular supply of thyroid gland	C2										
98			Discuss nerve supply of thyroid gland	C2										
99		Parathyroid gland	Discuss location and relations parathyroid gland with applied aspect	C2										
100			Discuss vascular supply of parathyroid gland	C2										
101			Discuss nerve supply of parathyroid gland	C2										
102		Practical	Label Neck bones on bone/ Models/ Chart		P4						Demo	2	OSPE	5
103	Adopt how to care and handle Models and charts				A	Role Play								
TOPIC: UPPER LIMB														
104	Week-11	Pectoral region, axilla	Define the basic anatomy of pectoral region and axilla	C1			Interactive Lecture/SGD	3	MCQ's	5				
105		Shoulder girdle	Explain the basic anatomy of pectoral region and axilla	C2										
106		Arm	Discuss shoulder girdle and bones of the arm	C2										
107		Muscles of upper limb, rotator cuff and cubital fossa	Define muscles and its types	C1										
108			Enlist the muscles connecting upper limb to thoracic wall, vertebral column and scapula with humerus	C2										
109			Explain the rotator cuff, cubital fossa and muscles involved in it	C2										
110		Practical	Label all bones of the shoulder girdle on model/ chart		P4						Demo	2	OSPE	5
111			Adopt how to care and handle Models and charts			A					Role Play			

S.No	Weeks	Content	Learning Outcomes	Domain			MIT's	Hours	Assesment	No of Items
				C	P	A				
112	Week-12	Upper Arm, blood and nerve supplies	Define upper arm and joints of the upper arm	C1			Interactive Lecture/SGD	3	MCQ's	5
113			Explain bone and joints of the upper arm	C2						
114			Discuss blood supply and nerve supply to the upper arm	C2						
115		Fore arm and Hand	Define forearm and hand	C1						
116			Discuss facial compartments and bones of the fore arm and hand	C2						
117			Express anatomy of the palm and dorsum of the hand including bones	C2						
118		Vessels, Nerves, Lymphatic's & Radiographic anatom	Define vessels, nerves and lymphatic	C1						
119			Summarize blood, nerve, lymphatic supplies of upper limb	C2						
120			Enlist all joints and its classification of upper limb	C2						
121		Practical	Demonstrate all bones of the upper arm, joints and its surface marking		P4					
122	Demonstrate all bones and joints of the forearm, hand and their classification with surface markings			P4						
123	Identify all bone and joints along with different views independly			P4						
124	Recognize the bony orientation of fore arm and hand effectively				A	Role Play				
TOPIC: LOWER LIMB										
125	Week-13	Gluteal Region, Skin	Define skin, fascia and gluteal region	C1			Interactive Lecture/SGD	3	MCQ's	5
126			Describe the gluteal region with its bony organization	C2						
127			Discuss blood supply and nerve supply to the gluteal region	C2						
128	Practical	Demonstrate all bones and joints of the gluteal region		P4		Demo	2	OSPE	5	
129		Identify all bones and joints of the gluteal region effectively			A	Role Play				
130	Week-14	Thigh, Popliteal Artery, Vein and Muscles	Define thigh and its muscles	C2			Interactive Lecture/SGD	3	MCQ's	5
131			Explain the popliteal fossa with its all contents	C2						
132			Discuss the front, medial aspect and back of the thigh	C2						
133		Practical	Demonstrate the surface landmarks of long bones independently		P4		Demo	2	OSPE	5
134	Adopt how to care and handle human skeletal models				A	Role Play				

S.No	Weeks	Content	Learning Outcomes	Domain			MIT's	Hours	Assesment	No of Items
				C	P	A				
135	Week-15	Leg and foot	Define leg and foot	C2			Interactive Lecture/SGD	3	MCQ's	5
136			Express the contents of leg from bone to its all facial compartments	C2						
137			Express the Sole and dorsum of the foot including bones	C2						
138		Practical	Demonstrate all bones and joints of the leg and foot with surface markings		P4		Demo	2	OSPE	5
139			Recognize the bony orientation of the foot and leg in effective way			A	Role Play			
140	Week-16	Muscles of lower limb, joints of lower limb, vessels, nerves & lymphatic system of lower limb	Define muscle of lower limb	C1			Interactive Lecture/SGD	3	MCQ's	5
141			Explain muscles of anterior, lateral and posterior fascial compartment of the leg	C3						
142			Discuss joints of lower limb and their classification	C2						
143			Summarize blood, nerve, lymphatic supplies of Lower limb	C3						
144		Practical	Demonstrate all muscles the leg and foot with surface markings		P4		Demo	2	OSPE	5
145	Adopt how to care and handle human skull models				A	Role Play				

PMS-610 ENGLISH-II 2(2-0)

Course Description

the students to meet their real life communication needs and skills. Further the course is designed to prepare the learners for paragraph writing, essay writing, application writing, study skills, academic skills and presentation skills.

Cognitive Domain

By the end of this subject, students should be able to:

1. **Use unified, precise, logical and Coherent writing and communication skills**
2. **Understand the basic structure and components of an essay writing**
3. **Learn the skimming, scanning and to extract themes from the given text**
4. **Write letter, application, memo, curriculum vitae and meetings minutes with proper structures and purpose**
5. **Understand the skills of preparing and presenting of well organized presentations**

Skills Domain

By the end of this subject, students should be able to:

1. **Practice on general topics and every-day conversation with questions answers sessions.**
2. **Give presentations individually and in groups to showcase the latent talent**
3. **Organize the procedure to improve their communication skills.**
4. **Practice on Academic skills**

Affective Domain

By the end of this subject, students should be able to:

1. **punctuality. Follow the specified norms of the IL, SGD teaching & learning.**
2. **Demonstrate the humbleness and use the socially acceptable language during academic and social interactions with human models, colleagues and teachers.**
3. **Demonstrate ethically competent decisions when confronted with an ethical, social or moral problem related to professional or personal life.**

TOS -PMS-610 ENGLISH-II 2(2-0)

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items			
				C	P	A							
TOPIC: PARAGRAPH WRITING													
1	Week-1	Practice in Writing a Good, Unified and Coherent Paragraph, Structural Components of a Paragraph, Writing Strategies to Write a Paragraph, Sentences in a Logical Order, Appropriate Form of Verbs, Meanings of Words in a Paragraph, Flow of Ideas	Identify the structural components of a paragraph	C1			Interactive Lecture/SGD	2	MCQ's	5			
2			Understand and practice free writing	C2									
3			Use pre- writing strategies to write a paragraph	C3									
4	Week-2		Arrange sentences in a logical order	C3			Interactive Lecture/SGD	2	MCQ's	5			
5			Make use of transitions to ensure a smooth flow of ideas	C3									
6			Learn how to write a paragraphs using the appropriate form of verbs	C1									
7	Week-3		Write a good, unified and coherent paragraph on any of the choice topic	C3			Interactive Lecture/SGD	2	MCQ's	5			
8			Comprehend meanings of words in a paragraph	C2									
9			Correct the forms of verbs in a paragraph	C3									
TOPIC: ESSAY WRITING													
10	Week-4	Introduction, Basics of Writing an Essay, Pre-writing Stage, Essays on Different Topics	Learn the basics of writing an essay	C1			Interactive Lecture/SGD	2	MCQ's	5			
11			Understand about the knowledge of Prewriting stage	C1									
12			Comprehend the writing stage of an essay	C2									
13			Write essays on different topics	C3									
TOPIC: CV AND JOB APPLICATION													
14	Week-5	Basics of Making Curriculum Vitae, Components of Writing an Application, Language and Sentences of Writing an Application, Writing an Application for Applying to a Job	Discuss the basics of making curriculum vitae	C2			Interactive Lecture/SGD	2	MCQ's	5			
15			Discuss the components of writing an application	C2									
16			Practice to make you own curriculum Vitae		P4		Role Play						
17	Follow the professional standards while making own curriculum vitae				A								
18	Week-6		Understand the language and sentences of writing an application	C1			Interactive Lecture/SGD				2	MCQ's	5
19			Learn to write an application for applying to a job	C1									
20		Translate an application from English to Urdu and vice versa	C3										

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items	
				C	P	A					
TOPIC: STUDY SKILLS											
21	Week-7	Skimming and Scanning, Intensive and Extensive, and Speed Reading, Summary and Precise Writing and Comprehension, Main Ideas and Supporting Detail in the Given Articles, Extract Themes from the Given Text	Understand skimming and scanning	C1			Interactive Lecture/SGD	2	MCQ's	5	
22			Distinguish between intensive and extensive Skimming and scanning	C4							
23			Identify the main ideas and supporting detail in the given articles	C1							
24	Week-8		Discuss how to extract themes from the given text	C2			Interactive Lecture/SGD	2	MCQ's	5	
25			Discuss the guidelines to read the content or a passage with different pace of speed	C2							
26	Week-9		Make summary of a passage or the assigned reading	C3			Interactive Lecture/SGD	2	MCQ's	5	
27			Comprehend a passage or article and write it precisely in your own words	C2							
TOPIC: ACADEMIC SKILLS											
28	Week-10		Letter/Memo Writing, Basics of Writing a Letter, Basic Pattern, Purpose, Circumstance and Action during Writing a Letter, Minutes of Meetings, Structure and Components of Writing the Official Minutes of a Meeting, Use of Digital Library and Internet	Understand the basics of writing a letter	C1			Interactive Lecture/SGD	2	MCQ's	5
29		Write accurate, to the point, clear and courteous letters of request		C5							
30	Week-11	Use appropriate salutation in writing a letter or memo		C3			Interactive Lecture/SGD	2	MCQ's	5	
31		Include relevant information in the letter		C1							
32		Try to convince and persuade the recipient by writing a letter		C3							
33	Week-12	Learn how to write a clear and concise memo		C1			Interactive Lecture/SGD	2	MCQ's	5	
34		Understand the purpose of writing a memo		C1							
35	Discuss the purpose of writing the minutes of a meeting	C2									
36	Week-13	Comprehend the structure and components of writing the official minutes of a meeting		C2			Interactive Lecture/SGD	2	MCQ's	5	
37		Learn the use of digital library and internet for retrieving the content for writing		C1							
38		Practice to write minutes of a meeting			P4		Role Play				
39		Follow the ethical norms while making minutes of a meeting				A					



S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/ Hours	Assesment	No of Items
				C	P	A				
TOPIC: PRESENTATION SKILLS										
40	Week-14	Personality Development (Emphasis on Content, Style and Pronunciation), Elements and Purpose of a Good Presentation, Well Organized, Effective and Clear Presentation	Understand elements of a good presentation	C1			Interactive Lecture/SGD	2	MCQ's	5
41			Know how to make well organized and clear presentation	C1						
42			Discuss the purpose of the presentation	C2						
43			Understand the significance of the audience of the presentation	C1						
44	Week-15		Make clarity and accuracy in presenting information	C3			Interactive Lecture/SGD	2	MCQ's	5
45			Plan to handle questions raised by the audience	C4			Role Play			
46			Develop and present effective presentations on the topics of common interest		P4					
47			Follow the professional and ethical norms during presenting the presentations on own topics			A				
48	Week-16		Understand how to prepare a good presentation using a variety of strategies to convey ideas	C1			Interactive Lecture/SGD	2	MCQ's	5
49			Learn to have emphasis on the content, style and pronunciation	C1						
50			Engage the audience in thought-provoking discussions	C3						
51			Wrap up convincingly, restating the key points	C5						

PMS-611 ISLAMIC STUDIES 2(2-0)

Course Description

This course is aimed at to provide Basic information about Islamic Studies. IT enhance understanding of the students regarding Islamic Civilization. This course will improve Students skill to perform prayers and other worships. it also help and enhance the skill of the students for understanding of issues related to faith and religious life.

Cognitive Domain

By the end of this subject, students should be able to:???

1. **Discuss the fundamental beliefs of Islam**
2. **Explain the concept of worship and spread of Islam**
3. **Describe the importance of Ethics**
4. **Explain Islamic sharia, human health and virtues of medical profession**
5. **Discuss the contribution achievements of Muslim doctors in society**

Affective Domain

By the end of this subject, students should be able to:

1. **Demonstrate punctuality.**
1. **Follow the specified norms of the IL, SGD teaching & learning.**
2. **Demonstrate the humbleness and use the socially acceptable language during academic and social interactions with human models, colleagues and teachers.**
3. **Demonstrate ethically competent decisions when confronted with an ethical, social or moral problem related to professional or personal life.**

TOS -PMS-611 ISLAMIC STUDIES 2(2-0)

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/ Hours	Assesment	No of Items	
				C	P	A					
TOPIC: FUNDAMENTAL BELIEFS OF ISLAM-1											
1	Week-1	Introduction to Islamic Studies	Recognize the need of subject to attain foundational and solid Islamic knowledge	C2			Interactive Lecture/SGD	2	MCQ's	5	
2		Importance of Islamic studies	Explain the importance of Islamic Studies and benefits its practical implication in medical field	C2							
3		The need of Revelation	Understand the limitation of wisdom and need of Revelation for guidance in life	C2							
4		Fundamental beliefs of Islam	Explain 'AQEEDA' and its basic types. Memorize Iman e Mufassal and Iman e Mujmil.	C2							
5		Belief Of Monotheism/ Taweed	Explain Tawheed,types of Tawheed,Arguments about the existance of Allah and impact of this belief on the life of a Person	C2							
TOPIC: FUNDAMENTAL BELIEFS OF ISLAM-2											
6	Week-2	Prophet hood	Define Prophet hood	C1			Interactive Lecture/SGD	2	MCQ's	5	
7			Explain difference between Rasool and Nabi	C2							
8			Describe Importance of Sunnat.	C2							
9			Discuss Sunnahs of Daily life like	C2							
10		Belief on The Day of Judgment	Explain Day of Judgement in light of Quran and Hadith its impact of this belief on Human life and results of denying Akhirat	C2			Interactive Lecture/SGD	2	MCQ's	5	
11			Discuss life of people in Heaven and Hell.	C2							
TOPIC: WORSHIPS-1											
12	Week-3	Definition of Worship	Discuss worships as a purpose of human life	C2			Interactive Lecture/SGD	2	MCQ's	5	
13		Salat/Prayer		Explain Salat, virtues of praying, Congregational prayer and Sin of not praying.	C2						
14				Explain different types of prayers and their virtues	C2						
15		Zakat/Obligatory Charity		Describe Obligation of Zakat in light of Quran and hadith	C2						
16				Explain Purpose of Zakat	C2						
17				Discuss the syllabus of Zakat For different properties	C2						
18				Learn to calculate Zakat Considering syllabus of Gold and silver	C2						

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
TOPIC: WORSHIPS-2										
19	Week-4	Saum/Fasting	Describe Fasting, Virtues of Fasting and Sin of Not Fasting in Hadith.	C2			Interactive Lecture/SGD	2	MCQ's	5
20			Discuss Fasting types other than Ramzan and their benefits	C2						
21			Describe Restrictions of fasting and Mufsidat of Fasting	C2						
22		Hajj/Pilgrimage	Explain Hajj its Syllabus, purpose and importance in light of Quran and Hadith	C2						
23			Discuss Faraiz,Wajibat of Hajj	C2						
TOPIC: WORSHIPS-3										
24	Week-5	Jihad	Describe Meaning, Virtues and types of jiihad.	C2			Interactive Lecture/SGD	2	MCQ's	5
25			Explain outcomes of not doing Jihad in Quran and Hadith	C2						
26		Rules of Jihad in Islam	Explain the guiding principles of Jihad in islam	C2						
27		Importance of Nurse/Para Medicals in Islam during Jihad	Describe Nurse/Para Medicals importance in Islam and famous Muslim women in field.	C2						
TOPIC: IMPORTANCE OF ETHICS										
28	Week-6	Importance of Ethics	Understand the importance of knowledge of Ethics.	C2			Interactive Lecture/SGD	2	MCQ's	5
29			Discuss Foundation of human ethics	C2						
30		Relationship between Religion and Ethics	Discuss the relationship between ethics and Religion	C2						
31			Discuss Islamic philosophy of ethics	C2						
32		Character of Holy Prophet S.A.W	Describe the character of Holy prophet(S.A.W).	C2						
TOPIC: ISLAMIC SHARIA AND HUMAN HEALTH										
33	Week-7	The five Basic objectives of Sharia	Describe the basic objectives of Islamic Sharia including protection of religion,life,property,race and wisdom	C2			Interactive Lecture/SGD	2	MCQ's	5
TOPIC: IMPORTANCE AND VIRTUES OF MEDICAL PROFESSION										
34	Week-8	Human health and Medical knowledge in light of Islam	Explain the importance of Human Health and Medical knowledge in light of Islam	C2			Interactive Lecture/SGD	2	MCQ's	5
35		The Holy Prophet(S.A.W) as a Doctor	Discuss the teaching of Holy Prophet(S.A.W) about the protection of Human Health	C2						
TOPIC: CONTRIBUTION AND ACHIEVEMENTS OF MUSLIM DOCTORS										
36	Week-9	Famous Muslim Physicians and Surgeons and Their Contributions in the field medicine	Describe the Contribution of Muslim Personalities in field of medicine	C2			Interactive Lecture/SGD	2	MCQ's	5

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/ Hours	Assesment	No of Items
				C	P	A				
TOPIC: QUALITIES OF A DOCTOR-1										
37	Week-10	Huququllah and Huqul ibad	Explain the Huququllah.	C2			Interactive Lecture/SGD	2	MCQ's	5
38			Describe Rights of Human beings including The Right of Parents, Children, neighbor and Relatives.	C2						
39		Wisdom and prudence	Describe Wisdom and prudence as A great Blessing of Allah	C2						
TOPIC: QUALITIES OF A DOCTOR-2										
40	Week-11	"Sympathy Responsible life Patience"	Explain the fundamental qualities of a Muslim Physician including Sympathy, Patience, Politeness, Humbleness, Responsibility in professional life	C2			Interactive Lecture/SGD	2	MCQ's	5
41			Learn at least one Hadith about each of these Qualities	C1						
42		"Polite in Speaking Humbleness"	Discuss the politeness in speaking, Humbleness in light of Seerat	C1						
43		keeping secrets	Describe Virtues of keeping privacy of patient	C2						
44		Self Respect	Explain Self-respect and ways to maintain self-respect of patient	C2						
TOPIC: QUALITIES OF A DOCTOR-3										
45	Week-12	Forgiveness Mercifulness/kindhearted Beneficence Observing promise Equality	Describe Forgiveness, Mercifulness, Beneficence, Observing promise and Equality in light of Quran and Hadith	C2			Interactive Lecture/SGD	2	MCQ's	5
46			Learn One Hadith about all these Ethical Qualities	C2						
TOPIC: RELATIONS AMONG DOCTORS										
47	Week-13	Good Deeds	Explain the co-operation among allied health professionals to Facilitate the patient	C2			Interactive Lecture/SGD	2	MCQ's	5
48		Jealousy	Define Jealousy.	C2						
49			Enlist Jealousy types	C2						
50			Explain Jealousy levels and Causes	C2						
51		Backbiting	Describe disadvantages of backbiting in Quran and Hadith	C2						
52		Envy	Understand Envy and its impact on life of a Muslim	C2						
53		Etiquette of Gathering	Describe Sunnahs of Gathering	C2						
54		Commands and Prohibition	Understand the Responsibility of Ammar bil Maroof and Nahi anil Munkir And its Guiding principles	C2						

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/ Hours	Assesment	No of Items
				C	P	A				
TOPIC: CONTEMPORARY PAKISTAN										
55	Week-14	Gentle speaking	Discuss gentle speaking and its virtues	C2			Interactive Lecture/SGD	2	MCQ's	5
56		Covering to Hide the weaknesses	Understand the importance of caring patient privacy and its virtues in Quran and Hadith	C2						
57		Mercy and Affection	Discuss Mercy and Affection. Learn one Hadith about these Qualities	C2						
58		"Consoling the Patient To inquire the Health of Patient Character Building of patient"	"Explain the way of Consoling the patient, inquiring the health of patient according to Sunnah and Learn Dua about inquiring the health of patient"	C2						
59		Avoiding unlawful medicine	Explain the orders of Sharia in utilizing unlawful medicine for patient treatment	C2						
60		Consent of patient	Describe the requirement of consent to maintain patient Autonomy.	C2						
61			Discuss other possible types of consent in case of patient unawareness	C2						
TOPIC: RESPONSIBILITIES OF A DOCTOR										
62	Week-15	Responsibilities of a doctor and allied health Staff	Explain Responsibilities of a Doctor and Allied Health Staff to prevent ill practices in health Department including bribe in appointments and transfer, unlawful and immoral practices, carelessness in Diagnosing and Treatment ,Earning Name through unfair means and bad attitude towards patient and his companions	C2			Interactive Lecture/SGD	2	MCQ's	5
TOPIC: RESPONSIBILITIES OF A DOCTOR AND SOCIETY										
62	Week-16	Responsibilities of a doctor and allied health Staff	Describe the role of health care professional in Hospital management including fair purchase of medicine and equipment awarding certifications.	C2			Interactive Lecture/SGD	2	MCQ's	5
63			Explain how to avoid ill practices of commission, advising of expensive Medicine and advertisements	C2						
64		Doctors and Society	Describe the guiding principles of Islam for healthcare staff in treating a patient	C2						

Recommended Text Books

MEDICAL BIOCHEMISTRY-II

- Harper's BIOCHEMISTRY Robert K. Murray, Daryl K. Granner 28th edition 20
- BIOCHEMISTRY by Dr. U. Satyanarayana, U Chakrapani Lehninger Principles of MEDICAL BIOCHEMISTRY, 6E
- Marks' Essentials of Medical BIOCHEMISTRY A Clinical Approach, Second Edition

HUMAN PHYSIOLOGY-II

- Essentials of Medical Physiology K Sembulingam, Prema Sembulingam Sixth Edition 2013
- Concise Physiology Dr. Raja Shahzad 1st Edition 2012
- Guyton And Hall Textbook Of Medical Physiology John E. Hall, Arthur C. Guyton Professor and Chair 2006
- Ross and Wilson Anatomy and Physiology in Health And Illness 11th Edition Anne Waugh, Allison Grant 2010

HUMAN ANATOMY-II

- Ross and Wilson Anatomy and Physiology in health and illness 11th Edition Waugh Grant.
- Clinical Anatomy (By regions) 9th edition, Richard S. Snell
- Netter Atlas of human anatomy 5th Edition Saunders.
- Gray's Anatomy for students 2nd Edition Drake Vogal Mitcell.

ENGLISH-II

- Writing. Advanced by Ron White. Oxford Supplementary Skills. Third Impression 1992. ISBN 0 19 435407 3 (particularly suitable for discursive, descriptive, argumentative and report writing).
- Practical English Grammar by AJ. Thomson and AV. Martinet. Exercises 2. Third edition. Oxford University Press 1986. ISBN 0 19 431350 6.

- Writing. Intermediate by Marie-Christine Boutin, Suzanne Brinand and Francoise Grellet. Oxford Supplementary Skills. Fourth Impression 1993. ISBN 019 435405 7 Pages 45-53 (note taking)
- Writing. Upper-Intermediate by Rob Nolasco. Oxford Supplementary Skills. Fourth Impression 1992. ISBN 0 19 435406 5 (particularly good for writing memos, introduction to presentations, descriptive and argumentative writing)
- Reading. Advanced. Brian Tomlinson and Rod Ellis. Oxford Supplementary Skills. Third Impression 1991. ISBN 0 19 453403 0.

ISLAMIC STUDIES

- Hameed Ullah Muhammad, "Emergence of Islam" , IRI, Islamabad
- Hameed Ullah Muhammad, "Muslim Conduct of State"
- Hameed Ullah Muhammad, 'Introduction to Islam
- Mulana Muhammad Yousaf Islahi,"
- Hussain Hamid Hassan, "An Introduction to the Study of Islamic Law" leaf Publication Islamabad, Pakistan.
- Ahmad Hasan, "Principles of Islamic Jurisprudence" Islamic Research Institute, International Islamic University, Islamabad (1993)
- Mir Wali Ullah, "Muslim Jurisprudence and the Quranic Law of Crimes" Islamic Book Service (1982)
- H.S. Bhatia, "Studies in Islamic Law, Religion and Society" Deep & Deep Publications New Delhi (1989)
- Dr. Muhammad Zia-ul-Haq, "Introduction to Al Sharia Al Islamia" Allama Iqbal Open University, Islamabad (2001)



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