



KHYBER MEDICAL UNIVERSITY

ALLIED HEALTH SCIENCES CURRICULUM

YEAR ONE STUDY GUIDE

(SEMESTER 1)

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.**

FIRST SEMESTER SUBJECTS

S.No	Subjects	Duration
1	PMS-601 MEDICAL BIOCHEMISTRY-I 4 (3-1)	16 weeks
2	PMS-602 HUMAN PHYSIOLOGY-I 4 (3-1)	16 weeks
3	PMS-603 HUMAN ANATOMY-1 4 (3-1)	16 weeks
4	PMS-604 ENGLISH-I 2(2-0)	16 weeks
5	PMS-605 PAKISTAN STUDIES 2(2-0)	16 weeks
6	PMS-606 COMPUTER SKILLS 2(1-1)	16 weeks



1st Semester

PMS-601 MEDICAL BIOCHEMISTRY-I 4 (3-1)

Course Description

This course will introduce the students with the structure and function of the macromolecules of life including carbohydrates, proteins, lipids, nucleotides and enzymes. It also covers how these macromolecules are digested and absorbed by human body and make cells and tissues.

Cognitive Domain

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

1. Describe the chemical composition of cells
2. Discuss the biochemical role of Carbohydrates, protein and lipid
3. Describe the digestion and absorption of macro and micro molecules of the cell.
4. Discuss different biochemical reactions in the cell
5. Explain the mechanism of action of hormones

Skills Domain

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

1. Determine the pH of blood/solution through pH meter
2. Demonstrate diffusion and osmosis in solutions
3. Estimate blood glucose level by spectrophotometer
4. Estimate albumin and total protein level in serum independently
5. Estimate serum cholesterol, triglycerides and HDL levels by spectrophotometer
6. Analyze blood samples for ABGs
7. Estimate serum hormone levels by ELISA/CMIA
8. Perform gastric juice chemical analysis

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-601 MEDICAL BIOCHEMISTRY-I 4 (3-1)

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
TOPIC: ACID, BASE, PH AND BUFFERS										
1	Week-1	Definition	Define acids, bases, pH and buffers	C1			Interactive Lecture/SGD	3	MCQ's	4
2		Types	Explain the different types of buffers and their role	C2						
3		Determination of pH	Determine the pH of blood/solution through pH meter		P4		Demo	1	OSPE	4
4		SOPs compliance	Comply to SOPs of pH metery and properly maintain a clean and clear instrument and working bench			A4	Role Play			
TOPIC: BIOCHEMICAL COMPOSITION AND FUNCTION OF CELL MEMBRANES, TRANSPORT ACROSS THE CELL MEMBRANE										
5	Week-2	Membrane chemical structure	Describe the structure of the plasma membrane	C2			Interactive Lecture/SGD	4	MCQ's	6
6		Components and functions	Explain the components of the cell membrane and their function	C2						
7	Week-3	Active and pas-sive transport	Classify different modes of transport across the cell membrane	C2			Interactive Lecture/SGD	2	MCQ's	3
8		Models	Explain different models of plasma membrane structure	C2						
9		Diffusion and osmosis	Demonstrate diffusion and osmosis in solutions		P3		Demo	2	OSPE	9
10		SOPs compli-ance	Cooperate with other lab staff and comply SOPs			A3	Role Play			
TOPIC: INTRODUCTION, STRUCTURE AND FUNCTION OF CARBOHYDRATES, DIGESTION AND ABSORPTION										
11	Week-4	Definition	Define carbohydrates	C1			Interactive Lecture/SGD	4	MCQ's	6
12		Classification	Describe monosaccharides, disaccharides, polysaccharides and their role in the human body	C2						
13	Week-5	Digestion and absorption	Explain digestion and absorption of carbohydrates in human body	C2			Interactive Lecture/SGD	2	MCQ's	3
14		Spectrophotometric blood glucose estimation	Estimate blood glucose level by spectrophotometer		P4		Demo	2	OSPE	9
15		SOPs compliance	Comply to SOPs of spectrophotometry and properly maintain the clean and clear instrument and working bench			A4	Role Play			
TOPIC: INTRODUCTION, STRUCTURE AND FUNCTION OF PROTEINS AND AMINO ACIDS, DIGESTION AND ABSORPTION OF PROTEINS										

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
15	Week-6	Composition and classification of pro-teins and amino acids	Classify different proteins and amino acids	C2			Interactive Lecture/SGD	3	MCQ's	6
16		Primary, secondary, tertiary and quater-nary structural organ-ization	Explain different structural organizations of proteins	C2						
17		Spectrophotometric estimation of serum albumin	Estimate albumin level in serum independently		P4		Demo	1	OSPE	
18	Week-7	Digestion and absorp-tion	Describe digestion and absorption of proteins and enzymes involved in it	C2			Interactive Lecture/SGD	3	MCQ's	6
19		Spectrophotometric estimation of protein	Estimate total protein level in serum independently		P4		Demo	1	OSPE	4
20		SOPs compliance	Comply to SOPs of spectrophotometry and properly maintain clean and clear instrument and working bench			A4	Role Play			
TOPIC: INTRODUCTION, STRUCTURE, FUNCTION, DIGESTION AND ABSORPTION OF LIPIDS										
21	Week-8	Definition	Define lipids and fatty acids	C1			Interactive Lecture/SGD	3	MCQ's	6
22		Composition and classification	Describe structure and composition of lipids	C2						
23		Chemistry and prop-erties of cholesterol and cholecalciferol	Explain the chemical nature of steroids and sterols	C2						
24		Serum cholesterol, triglycerides profile	Estimate serum cholesterol, triglycerides by spectrophotometer independently		P4		Demo	1	OSPE	4
25	Week-9	Digestion and absorp-tion	Explain how lipids are digested and absorbed in body	C2			Interactive Lecture/SGD	3	MCQ's	6
26		HDL level	Estimate serum HDL levels by spectrophotometer independently		P4		Demo	1	OSPE	4
27		SOPs compliance	Comply to SOPs of spectrophotometry and properly maintain clean and clear instrument and working bench			A4	Role Play			
TOPIC: VITAMINS										

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
28	Week-10	Definition	Define vitamins	C1			Interactive Lecture/SGD	3	MCQ's	6
29		History, nomenclature and classification of vitamins	Describe classification, functions and deficiency manifestations of vitamins	C2						
30		RDA, EAR, AI, UL	Explain dietary reference intake for vitamins	C2						
31		Folic Acid level	Estimate folic acid levels by spectrophotometer independently		P4		Demo	1	OSPE	4
32		SOPs compliance	Comply to SOPs of spectrophotometry and properly maintain clean and clear instrument and working bench			A4	Role Play			
TOPIC: VITAMINS										
33	Week-11	Definition	Define minerals	C1			Interactive Lecture/SGD	3	MCQ's	6
34		Major, minor ultra-trace minerals	Describe classification, functions and deficiency manifestations of minerals	C2						
35		Electrolyte level	Estimate Electrolyte level independently		P4		Demo	1	OSPE	4
36		SOPs compliance	Comply proper maintaince of instrument and working bench			A4	Role Play			
TOPIC: FLUID, ELECTROLYTE AND ACID-BASE BALANCE										
37	Week-12	Water and electrolyte balance, Acid-base balance	Describe body water and electrolyte distribution in ECF	C2			Interactive Lecture/SGD	4	MCQ's	6
38			Describe ICF and its regulation	C2						
39		Renin-angiotensin-aldosterone system	Explain respiratory metabolic acidosis	C2						
40			Explain respiratory metabolic alkalosis	C2						
41		ABGs report	Describe ABGs parameter	C2			Interactive Lecture/SGD	2	MCQ's	3
42	Week-13	ABGs analysis	Analyze blood samples for ABGs		P4		Demo	2	OSPE	9
43	SOPs compliance	Comply to SOPs of ABGs analyzer and properly maintain clean and clear instrument and working bench			A4	Role Play				
TOPIC: HORMONES										
44	Week-14	Classification	Explain hormones and its classification	C2			Interactive Lecture/SGD	3	MCQ's	4
45		Chemical nature	Describe the chemical nature of hormone	C2						
46		Mechanism of action	Explain the mechanism of action of different hormones	C2						
47		Hormone analysis	Estimate serum hormone levels by ELISA/CMIA		P4		Demo	1	OSPE	4
48		SOPs compliance	Comply to SOPs of the instrument and properly maintain clean and clear instrument and working bench			A4	Role Play			
TOPIC: CELL SIGNALING AND HORMONE ACTION										

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
49	Week-15	Definition	Define signals and receptors	C2			Interactive Lecture/SGD	4	MCQ's	6
50		intracellular and extracellular receptors	Describe intracellular and extracellular receptors	C2						
51		Direct, autocrine, paracrine and endo-crine	Explain different modes of signaling	C2						
TOPIC: COMPOSITION AND FUNCTION OF SALIVA AND GASTRIC ACID (HCL), PANCREATIC JUICE AND BILE										
52	Week-16	Composition and function	Describe the chemical composition and function of saliva and HCL	C2			Interactive Lecture/SGD	2	MCQ's	3
53		Pancreatic juice and its enzymes	Describe pancreatic juice and digestive enzymes present in it	C2						
54		Role of bile in lipid digestion	Describe bile and its role in the digestion of lipids	C2						
55		Function of GIP, CCK, Gastrin, somatostatin	Describe the function and secretion of GIP, CCK, Gastrin, somatostatin.	C2						
56		Gastric juice analysis	Perform gastric juice chemical analysis		P4		Demo	2	OSPE	9
57		SOPs compliance	Maintain clean and clear instrument and working bench and follow SOPs			A4	Role Play			

PMS-602 HUMAN PHYSIOLOGY-I 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 furthermore the explanations of physiological processes and functioning of the body from cell or-ganelle to organ system. In this way one should be able to apply the knowledge in practical and clinical life of medical field to explain various physiological processes.

Cognitive Domain

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

1. **Describe the basic concepts of physiology beginning from the cell organization to organ system function.**
2. **Discuss the organization of cell, tissue, organ and system concerning their functions.**
3. **Explain the physiology of Respiration, G.I.T, Urinary system and Endocrine system–.**

Skills Domain

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

1. **Measure the Basic Physiological Measurements effectively (BMI, Body structure, Body surface area, Mid arm circumference).**
2. **Study of Microscope and use the microscope to look slides effectively.**
3. **Identify various muscles of the body in various organs effectively.**
4. **Examination of Endocrine system on models/charts, Identification of var-**

- ious endocrine glands effectively.
5. **Estimation and inferencing of respiratory volumes and capacities by PFTs effectively, Identification of Various respiratory system components effectively.**
6. **Demonstrate the abdominal examination to locate various viscera's independently.**
7. **Identification of various parts of the urinary system.**
8. **Identification of various organs/components of the reproductive system effectively.**
- 1.

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-602 HUMAN PHYSIOLOGY-I 4 (3-1)

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items	
				C	P	A					
TOPIC: GENERAL PHYSIOLOGY											
1	Week-1	General Physiology	Define Physiology	C2			Interactive Lecture/SGD	3	MCQ's	4	
2		Level of functional organization starting from an atom to individual Mechanism of homeostasis	Define homeostasis	C1							
3			Describe various functional levels of the human body	C2							
4			Describe the Mechanism of homeostasis	C2							
5	Week-1	Basic Physiological Measurements(BMI, Body structure)	Measure the Basic Physiological Measurements Independently (BMI, Body structure)		P4		Demo	1	OSPE	4	
6		Measuring devices of basic physical measurements of body	Can use and take care of measuring devices			A4	Role Play				
7	Week-2	Skin and integumentary system	Explain the function of skin	C2			Interactive Lecture/SGD	3	MCQ's	4	
8			Explain the function of integumentary system	C2							
9		Week-2	Basic Physiological Measurements (Body surface area, Mid arm circumference)	Measure the Basic Physiological Measurements Independently (Body surface area, Mid arm circumference)		P4		Demo	1	OSPE	4
10			Measuring devices of basic physical measurements of body	Can use and take care of measuring devices			A4	Role Play			
TOPIC: CELL											
11	Week-3	Cell organelles	Define cell organelles	C2			Interactive Lecture/SGD	4	MCQ's	6	
12			Describe the structure of cell organelles	C2							
13			Explain the function of cell organelles	C2							

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
14	Week-4	Prokaryotic and eukaryotic cells	Describe structures and purposes of basic components of prokaryotic and eukaryotic cells	C2			Interactive Lecture/SGD	3	MCQ's	4
15		Mitosis and meiosis	Differentiate mitosis and meiosis during the life cycle	C4						
16		Tissue	Illustrate the structure and function of tissues independently		P4		Demo	1	OSPE	9
17		Describe various parts of a microscope and their function	Study of Microscope and can use the microscope to look slides effectively			A4	Role Play			
TOPIC: MUSCLES NEUROMUSCULAR JUNCTION										
18	Week-5	Three types of muscles, identification of muscles	Explain various types of muscles and their distinct features	C2			Interactive Lecture/SGD	4	MCQ's	6
19		Structure of smooth, Skeletal and cardiac muscles	Describe the structure and function of muscles	C2						
20	Week-6	Presynaptic, Postsynaptic Membrane Synapticleft, Neurotransmitter, action potential and muscle cotraction mechanism	Explain the mechanism of action of muscles contraction.	C2			Interactive Lecture/SGD	2	MCQ's	3
21			Explain the working of the neuromuscular junction	C2						
22		Muscle types and function/ Identification of muscles and their function/working	identify various muscles of the body in various organs independently		P4		Demo	2	OSPE	9
23	Muscular system	Can arrange and disseminate muscular system of minikin of the muscular system			A4	Role Play				
TOPIC: ENDOCRINE SYSTEM										
24	Week-7	All glands of body starting from hypothalamus	Define various endocrine glands and their Hormones	C1			Interactive Lecture/SGD	4	MCQ's	6
25		Hormones of Endocrine glands with function	Explain function of various hormones secreted by any specific gland	C2						

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
26	Week-8	Metabolic and special actions of hormones and their comparisons	Differentiate the action of hormones of hormones regarding their actions	C4			Interactive Lecture/SGD	2	MCQ's	3
27		Endocrine system; Glands and Hormones	Examination of Endocrine system on models/charts, Identification of various endocrine glands effectively		P4		Demo	2	OSPE	9
28		Endocrine glands manikins	Locate, Arrange and disseminate the endocrine glands using manikins			A4	Role Play			
TOPIC: RESPIRATORY SYSTEM										
29	Week-9	Respiratory System	Define respiratory system	C2			Interactive Lecture/SGD	3	MCQ's	4
30		Respiratory parts starting from nose till alveoli, coverings of the lungs	Explain parts of the respiratory system/Bronchial tree	C2						
31		Respiratory muscles, diaphragm, role of lungs elastic tissue in breathing	Describe the mechanism of breathing	C2						
32		Function of Respiratory system regarding various specific functions of cells, tissues and organs	Explain the function of respiratory parts	C2						
33		Respiratory volumes and capacities	Estimation and inferencing of respiratory volumes and capacities by PFTs Independently		P4		Demo	1	OSPE	9
34		Spirometer	Use, arrange or change the parts of Spirometer			A4	Role Play			
35	Week-10	Respiratory membrane, partial pressures of gases in; air alveoli, arterial and venous blood,tissue fluid/ extracellular fluid, inside of cell and in left atria of the heart. Transport mechanism of various gases	Illustrate the mechanism of gases exchange	C2			Interactive Lecture/SGD	3	MCQ's	4
36		Cells, Tissues and Organs of respiratory system	Identify various respiratory system components Independently		P4		Demo	1	OSPE	9
37		SOPS	Comply to SOPS			A4	Role Play			
TOPIC: DIGESTIVE SYSTEM										

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
38	Week-11	All components of the digestive system starting from mouth to anus	Define components of the digestive system and accessory organs	C2			Interactive Lecture/SGD	3	MCQ's	4
39		Composition of the secretions of various digestive glands/cells and their function in digestion	Describe the secretory and digestive function of the various parts of digestive system	C2						
40		Composition of Pancreatic and bile and role of each component in digestion	Illustrate the role of Pancreas and liver in digestion of food	C2						
41		Inspection and Palpation	Demonstrate the inspection and palpation of liver and stomach independently		P4		Demo	1	OSPE	
42		informed consent	Take informed consent of physical examination of abdomen from the patient effectively			A4	Role Play			
43	Week-12	Mechanism of digestion of various food components and mechanism of absorption across GIT	Explain the digestion of various food components in gastrointestinal tract	C2			Interactive Lecture/SGD	3	MCQ's	4
44		Absorption of food/Materials starting from Mouth till large intestine	Describe the absorption of food in various parts of the gastrointestinal tract	C2						
45		Inspection and Palpation	Demonstrate the inspection and palpation of abdominal cavity independently		P4		Demo	1	OSPE	
46		informed consent	Take informed consent of physical examination of abdomen from the patient effectively			A4	Role Play			
47	Week-13	GIT cells secrete mucus, enzymes, Acid and other role of these cells/tissues of GIT in digestion and controlling digestion and absorption	Explain the function of various glandular cells	C2			Interactive Lecture/SGD	3	MCQ's	4
48		Inspection and Palpation	Demonstrate the inspection and palpation appendix independently		P4		Demo	1	OSPE	
49		informed consent	Take informed consent of physical examination of abdomen from the patient effectively			A4	Role Play			
TOPIC: URINARY SYSTEM										

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items	
				C	P	A					
50	Week-14	Definition	Define urinary system	C1			Interactive Lecture/SGD	3	MCQ's	4	
51		Kidney, Nephrons, parts of kidney, ureters, renal artery and vein, urinary bladder	Describe organs of the Urinary system	C2							
52		Filtration of Blood across Glomerulus, reabsorption of GFR and excretion of materials	Describe the function of nephrons, Glomerulus, and Bowman's capsule	C3							
53		Control of the GFR and urine composition	Explain filtration, Filtration rate, reabsorption and excretion of various materials in Kidney	C2							
54		Details of urine formation and the control of its composition	Description of Urine formation and its composition	C2							
55		Various parts of the nephron contributing in acid-base control of ECF	Explain the role of kidney controlling acid-base balance	C2							
56		Factors affecting GFR and its composition	Explain the regulation of ECF and excretion/conservation of various components of GFR	C2							
57	Week-14	Identification of Kidney, Ureters, Renal Artery and vein, Glomerulus, Parts of nephron and its absorptive distribution	Identification of various parts of the urinary system		P4		Demo	1	OSPE	9	
58		Urinary system	Arrange and disseminate and locate the urinary system using manikin's			A4					Role Play
TOPIC: REPRODUCTIVE SYSTEM											
59	Week-15	Testis, Epididymis, Rete testis, glands, penis and scrotum	Define the male reproductive organs and supporting components of male reproductive system	C1			Interactive Lecture/SGD	3	MCQ's	4	
60		Function of; Testis, Epididymis, Rete testis, glands, penis and scrotum	Describe the function of various male reproductive organs/tissues/cells	C2							
61		Starting from diploid cell till haploid sperm, role of hormone and other supporting cells	Explain the formation of Sperms and role of various hormones	C2							
62		Part of reproductive system	Identification of various parts of the reproductive system		P4						Demo
63		Reproductive system	Arrange and disseminate and locate the reproductive system using manikin's			A4					Role Play

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
64	Week-16	Ovaries, Hormones, Fallo-pian tube, uterus, cervix, vagina	Describe the female reproductive organs	C2			Interactive Lecture/SGD	3	MCQ's	4
65		Detailed descriptions of egg formation and its ovula-tion process	Explain the egg formation and ovulation	C2						
66		Different phases of men-strual cycle and description of mammary glands	Describe Menstrual cycle, pregnancy func-tion of mamma-ry glands	C2						
67		Lactation and role of hor-mones, various techniques of fertility control	Illustrate the process of lactation and fertil-ity control	C2						
68		Labeling of male and female reproductive parts, identification of various phases of; menstrual cycle, oogenesis and spermato-genesis	Identification of various organs/components of the re-productive system independently on manikins /models/ Charts.		P4		Demo	1	OSPE	9
69		The reproductive system of male and fe-male(Man-ikins)	Arrange and disseminate and locate the re-productive system organs of male and fe-male using manikins			A4	Role Play			

PMS-603 HUMAN ANATOMY-1 4 (3-1)

Course Description

Students are been able to identify the principle structures of tissues, organs and systems. They can discuss the different concepts and terms of general anatomy including skeleton and Musculo skeletal system and explain the anatomy of Thorax, Abdomen and pelvis.

Cognitive Domain

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

1. **Identify the principle structures of tissues, organs and systems**
2. **Discuss the different concepts and terms of general anatomy of skeleton**
3. **Discuss the different concept and terms of musculoskeletal system**
4. **Explain the anatomy of the Thorax and its blood supply**
5. **Discuss the anatomy of Abdomen and its blood supply**
6. **Describe the anatomy of pelvis and its blood supply**

Skills Domain

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

1. **Demonstrate the bony orientation of axial and appendicular skeletal system.**
2. **Identify different chambers, surfaces and borders of the human heart.**
3. **Identify all the accessory organs of GIT from human Models and 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. **Make ethically competent decisions when confronted with an ethical, social or moral problem related to professional or personal life.**

TOS -PMS-603 HUMAN ANATOMY-1 4 (3-1)

S.No	Weeks	Content	Learning Outcomes	Domain			MIT's	Hours	Assesment	No of Items
				C	P	A				
TOPIC: GENERAL ANATOMY										
1	Week-1	Definition	Define anatomical terms related to the position and movement	C1			Interactive Lecture/SGD	4	MCQ's	6
2		Muscles	Discuss different types of muscles	C2						
3		Description	Summarize the general concept of blood vessels, lymphatic system and Nervous system	C2						
4	Week-2	Bones and joints	Explain the bones and joints with their regional classification and surface markings	C3			Interactive Lecture/SGD	2	MCQ's	3
5			Demonstrate the bony orientation of axial and appendicular skeletal system		P4		Demo	2	OSPE	9
			Organize a skeleton from dearticulated bones		A4		Role Play			
TOPIC: BONES AND CARTILAGE										
6	Week-3	Osteology	Discuss in detail structure of bones and its classification	C2			Interactive Lecture/SGD	4	MCQ's	6
7		Functions of Bones	Enlist functions of bones	C1						
8		Classification of bones	Explain structural and regional and developmental classification of bone.	C2						
9		Parts of developing long bones	Describe the structure of long bones	C2						
10		Blood supply of bones Rule of direction of nutrient foramen								
11		Gross structure of long bone								
12	Week-4	Surface marking	Identify surface landmarks of long bones		P1		Demo	2	OSPE	9
13	Week-4	Cartilage	Describe structure of cartilage in detail	C2			Interactive Lecture/SGD	2	MCQ's	3
14		Development of bone and cartilage								
15		Lymphatic vessels & nerve supply								
TOPIC: THORACIC WALLS										

S.No	Weeks	Content	Learning Outcomes	Domain			MIT's	Hours	Assesment	No of Items				
				C	P	A								
16	Week-5	Structures of the thoracic wall	Describe the structure of thoracic wall in detail	C2			Interactive Lecture/SGD	4	MCQ's	6				
17		Dorsalspine(Vert brae), costal cartilage and Ribs	Discuss the surface anatomy of dorsal spine, sternum, costal cartilages and ribs.	C2										
18		Sternum	Explain the normal movement of the chest wall in the process of aeration of the lungs.	C2										
19		Intercostal Muscles	Explain origin ,insertion and action of muscles of thoracic wall	C2										
20		Intercostal Nerves	Explain intercostal nerves	C2										
21		Diaphragm	Discuss structure of diaphragm in detail	C2										
22	Week-6	Blood supply of thoracic wall	Explain blood supply of thoracic wall	C2			Interactive Lecture/SGD	2	MCQ's	3				
23		Joints of thorax	Discuss in detail functional movements across the joints of thorac wall	C2										
24		Surface anatomy	Locate origin ,insertion of intercostal muscles independently		P4						Demo	2	OSPE	9
25			Identify bony landmarks of dorsal spine independently		P4									
26			Observe thoracic and abdominal wall movements		P1									
27			Identify types of ribs independently		P4									
28	Protocols	Show respect towards subject while observing thoracic wall movements			A	Role Play								
29	Week-7	Mediastinum/Pleura	Describe s the general arrangement of the thoracic viscera and their relationship to one another and to the chest wall.	C2			Interactive Lecture/SGD	4	MCQ's	6				
30			Discuss structures related to anterior ,posterior superior and inferior mediastinum	C2										
31		Trachea/Lungs	Distinguish thoracic cavity, pleural cavity (pleural space), pericardial cavity, and cost diaphragmatic recess.	C2										
32		Bronchopul-monary segments	Explain broncho pulmonary segment as functional unit of lung	C2										
33		Pericardium	Explain the structure of heart, including its layers ,chambers conducting system,	C2										



S.No	Weeks	Content	Learning Outcomes	Domain			MIT's	Hours	Assesment	No of Items
				C	P	A				
34	Week-8	Heart – Its blood supply, venous drainage & nerve supply	Explain blood supply and nerve supply of heart	C2			Interactive Lecture/SGD	4	MCQ's	6
35		Large veins of thorax, superior and inferior vena cava. Pulmonary veins brachiocephalic veins. Large arteries of aorta	Explain the structure and location of largest blood vessels within the thoracic cavity	C2						
36		Applied anatomy	Discuss different pathological conditions related to lungs and heart	C2						
37		Surface anatomy	Identify lobes of lungs independently		P4		Demo	1	OSPE	
38			locate broncho-pulmonary segments independently		P4					
39		Human Heart	Identify different chambers, surfaces and borders of the human heart		P4					
40		Cardiopulmonary Anatomy	Adopt how to care and handle human heart models			A4	Role Play			
TOPIC: GIT										
41	Week-9	Anterior & Posterior Abdominal wall	Describe the basic anatomy and projection of viscera on the anterior abdominal wall and back	C2			Interactive Lecture/SGD	4	MCQ's	6
42		Explanation anterior wall	Explain superficial and deep fascia	C2						
43		Muscles	Describe the origin, insertion, nerve supply and actions of anterolateral abdominal wall muscles	C2						
44		Blood supply	Discuss blood supply and nerve supply of anterior abdominal wall	C2						
45		Lymphatic	Discuss lymphatic drainage of anterior abdominal wall	C2						
46		Posterior Abdominal wall	Enumerate the structure of posterior abdominal wall	C2						
47		Explanation	Explain the structures of lumbar vertebrae	C2						

S.No	Weeks	Content	Learning Outcomes	Domain			MIT's	Hours	Assesment	No of Items
				C	P	A				
48	Week-10	Surface anatomy	Label the origin and insertion of muscles on lumbar vertebrae	C1			Interactive Lecture/SGD	2	MCQ's	3
49		Inguinal Canal	Explain the extent of the inguinal canal, its boundaries and its contents	C2						
50		Inguinal Canal Boundaries	Describe the boundaries of inguinal canal	C2						
51		Contents	Enlist the contents of inguinal canal in male and female	C1						
52		Differentiation	Differentiate between direct and indirect inguinal hernia	C4						
53		Protocols	Identify the bony landmarks of lumbar vertebrae		P4		Demo	2	OSPE	
54		Protocols	Follow the protocols of handling bones with care			A4	Role Play			
55	Week-11	Explanation esophagus	Explain structural anatomy of esophagus	C2			Interactive Lecture/SGD	3	MCQ's	4
56		Description	Describe gastro esophageal sphincter	C2						
57		Description stomach	Describe gross structure of stomach	C2						
58		Pyloric sphincter	Discuss function of pyloric sphincter and its relationship	C2						
59		Blood supply	Explain blood supply ,lymphatic drainage of stomach	C2						
60		Esophagus & Stomach	Identify esophagus & Stomach from human Models and charts		P4		Demo	1	OSPE	
61			Adopt how to care and handle human Models and charts			A4	Role Play			
62	Week-12	Duodenum	Write the relations of various parts of duodenum	C2			Interactive Lecture/SGD	3	MCQ's	4
63		Explanation	Explain structure of jejunum and ileum	C2						
64		Blood supply	Explain blood supply ,nerve supply and lymphatic drainage of small intestine	C2						
65		Cecum	Explain structure of cecum	C2						
66		Relationship od cecum	Explain anterior, posterior and medial relation of cecum	C2						
67		Blood supply	Explain blood supply ,nerve supply and lymphatic drainage of cecum	C2						
68		Small & Large intestine	Identify Small & Lage intestine from human Models and charts		P4		Demo	1	OSPE	
69		Adopt how to care and handle human Models and charts			A4	Role Play				

S.No	Weeks	Content	Learning Outcomes	Domain			MIT's	Hours	Assesment	No of Items
				C	P	A				
70	Week-13	Description liver	Illustrate borders and surfaces of liver	C2			Interactive Lecture/SGD	3	MCQ's	4
71		Description	Illustrate visceral surface of liver	C2						
72		Discussion	Describe the peritoneal reflections and associated ligaments of liver	C2						
73		Lobes	Describe lobes and segments of liver	C2						
74		Blood supply	Describe the formation, tributaries and branches of hepatic portal veins	C2						
75		Description gall bladder	Describe the structure of gall bladder and its relationship	C2						
76		Blood supply	Explain the blood supply, nerve supply and lymphatic drainage of gall bladder	C2						
78		Liver & gall bladder	Identify Liver & gall bladder from human Models and charts		P4		Demo	1	OSPE	4
79			Adopt how to care and handle human Models and charts			A4	Role Play			
80	Week-14	Explanation pancreas	Describe the structure of pancreas and ductal system	C2			Interactive Lecture/SGD	3	MCQ's	4
81		Blood supply	Explain blood supply, nerve supply of accessory organs of GIT	C2						
82		Explanation/relationship of kidney	Describe renal structures and relationship of right and left kidney	C2						
83		Blood supply	Explain blood supply, nerve supply and lymphatic drainage of renal system	C2						
84		Description ureter	Describe structure of ureter	C2						
85		Relationship	Explain important relationship of right and left ureter	C2						
86		Pancreas & Kidney	Identify Pancreas & Kidney from human Models and charts		P4		Demo	1	OSPE	4
87		Adopt how to care and handle human Models and charts			A4	Role Play				
TOPIC: PELVIC WALLS										
88	Week-15	Bony pelvis	Discuss the basic structures and orientation of the bony pelvis	C2			Interactive Lecture/SGD	3	MCQ's	4
89		Pelvic walls	Explain the structure of the pelvic walls (Anterior, posterior, lateral, inferior)	C2						
90		Nerves, Vessels, Lymphatic	Summarize all veins, arteries, nerves and lymph drainage in the pelvis	C2						
91		Pelvis	Identify Pelvis from human Models and charts		P4		Demo	1	OSPE	4
100			Adopt how to care and handle human Models and charts			A4	Role Play			

S.No	Weeks	Content	Learning Outcomes	Domain			MIT's	Hours	Assesment	No of Items
				C	P	A				
TOPIC: PELVIC CAVITY										
101	Week-16	Pelvic Viscera	Enlist all the contents of pelvic Viscera in the male and female pelvic cavity	C1			Interactive Lecture/SGD	3	MCQ's	4
102		Vas Deferens, Seminal Vesicles, Ejaculatory Ducts, prostate)	Discuss the male pelvic Viscera and genital organs	C2						
103		Ovaries, uterine tubes, uterus	Explain female genital organs	C2						
104		Pelvic Viscera	IdentifyPelvic Viscera from human Models and charts		P4		Demo	1	OSPE	4
105			Adopt how to care and handle human Models and charts			A4	Role Play			

PMS-604 ENGLISH-I 2(2-0)

Course Description

This course is designed to acquaint students with the basics of English grammar and its significance for structuring ideas in sentences in the best possible communicative manner. Further, it gives an overview of the parts of speech, structuring sentences to write a unified paragraph. It enhances students' ability to analyze and differentiate between phrases, clauses and sentence in function as well as structure. In addition it explains the rules of spelling and punctuation.

Cognitive Domain

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

1. Describe basic concept of basic grammar
2. Explain Parts of Speech its types and discuss that how same words use as different parts of speech.
3. Explain Parts of Speech its types and discuss that how same words use as different parts of speech.
4. justify critical thinking and conversational skills
5. Understand the Do's and Don'ts in Presentation
6. Distinguish Descriptive, narrative, expository and Narrative Paragraphs

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

Affective Domain

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

1. 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-604 ENGLISH-I 2(2-0)

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
TOPIC: BASICS OF GRAMMAR										
1	Week-1	Definition	Define Parts of Speech	C1			Interactive Lecture/SGD	2	MCQ's	4
2		Parts of Speech	Explain Parts of Speech its types and discuss that how same words use as different parts of speech.	C2						
3	Week-2	Articles	Discuss Articles its types and rules.	C2			Interactive Lecture/SGD	2	MCQ's	4
4		Sentence with its Types	Discuss Sentence and its types on the basis of structure and function	C2						
5	Week-3	Subject Verb agreement	Explain Subject verb agreement	C2			Interactive Lecture/SGD	2	MCQ's	4
6		Analysis of Phrase, Clause and Sentence Structure	Discuss phrase, clause and sentence with types in detail	C2						
7	Week-4	Transitive and Intransitive Verbs	Discuss transitive and Intransitive verbs and identify them in a sentence.	C2			Interactive Lecture/SGD	2	MCQ's	4
8		Active and Passive Voice	Explain active and passive voice, their structure and rules.	C2						
9	Week-5	Punctuation and Spelling	Discuss Rules of Punctuation and Spelling	C2			Interactive Lecture/SGD	2	MCQ's	4
10		Unified Sentence	Explain unified sentence thoroughly and practice it correctly.	C2						
11		Definition	Define Comprehension	C1						
12		Comprehension procedure	Explain Comprehension and its procedure	C2						
13TOPIC: DISCUSSION14										
13	Week-6	Critical Thinking and Conversational Skills	justify critical thinking and conversational skills	C6			Interactive Lecture/SGD	2	MCQ's	4
14		Practice	Practice on general topics and every-day conversation with questions answers sessions.		P4					
TOPIC: LISTENING										
15	Week-7	Definition	Define Listening skills	C1			Interactive Lecture/SGD	2	MCQ's	4
16		Techniques	Discuss Listening Techniques	C2						
17		Process	Discuss listening process	C2						
TOPIC: TRANSLATION SKILLS										
18	Week-8	Definition	Define Translation	C1			Interactive Lecture/SGD	2	MCQ's	4
19		Education translation	Discuss educational translation	C2						
20		Strength	Discuss strengthen language skills through translation	C2						
TOPIC: PARAGRAPH WRITING										

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/ Hours	Assesment	No of Items
				C	P	A				
19	Week-9	Definition	Define Paragraph	C1			Interactive Lecture/SGD	2	MCQ's	4
20		Principles	Explain Unity, Order and Variety of Para-graph	C2						
21	Week-10	Structure/Organization	Identify Topic sentence, supporting sentences and concluding sentence	C2			Interactive Lecture/SGD	2	MCQ's	4
22	Week-11	Loose and Periodic Sentences	Discuss Loose and Periodic Sentences.	C3			Interactive Lecture/SGD	2	MCQ's	4
23	Week-12	Types	Distinguish Descriptive, narrative, expository and Narrative Paragraphs	C4			Interactive Lecture/SGD	2	MCQ's	4
TOPIC: PRESENTATION SKILLS										
24	Week-13	Definition	Define Presentation Skills	C1			Interactive Lecture/SGD	2	MCQ's	4
25		Types	Discuss different types of presentation	C2						
25	Week-14	Structure	Explain the structure presentation	C2			Interactive Lecture/SGD	2	MCQ's	4
26	Week-15	Essentials	Discuss the stage fright and its antidotes	C2			Interactive Lecture/SGD	2	MCQ's	4
27	Week-16	Do's and Don'ts in Presentation	Understand the Do's and Don'ts in Presentation	C2			Interactive Lecture/SGD	2	MCQ's	4
28		Presentation	Give presentations individually and in groups to showcase the latent talent			P4	Demo	2	OSPE	
29		Body Language	Communicate through body language		P1					
30		Communication Skills	Organize the procedure to improve their communication skills		P2					
31		Q & A Session	Respond to different questions in the Q & A session		P2					
32			Show respect towards teachers and fellow			A				
33			Participate in class discussions			A				

PMS-605 PAKISTAN STUDIES 2(2-0)

Course Description

Pakistan Studies as an academic discipline deals with the political, economic, and social conditions related to Pakistan. It enlightens about the fundamental factors that led to the creation of the Two-Nation Theory. More simply, this subject addresses questions like 'What compelled Muslims to think for a separate state? Furthermore, It informs about the sacrifices that Indian Muslims made and the challenges they faced in the struggle of Pakistan.

Cognitive Domain

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

1. **Develop vision of Historical Perspective, Government, Politics, Contemporary Pakistan, ideological background of Pakistan.**
2. **Study the process of governance, national development, issues arising in the modern age and posing challenges to Pakistan.**
3. **Promote an understanding of the ideology of Pakistan, the Muslim struggle for independence and endeavors for establishing a modern welfare Islamic state.**
4. **Acquaint the students with various phases of Pakistan's historical, political and constitutional developments.**
5. **Discuss Pakistan's strategic position in international politics, especially its relations with neighboring and Muslim countries.**
6. **Inculcate patriotism in the hearts of students so that they may become a good citizen.**

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-605 PAKISTAN STUDIES 2(2-0)

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
TOPIC: PAKISTAN STUDIES										
1	Week-1	Importance of Pakistan Studies	Explain the importance of Pakistan Studies as a subject which can help in understanding the origin, creation and development of Pakistan.	C2			Interactive Lecture/SGD	2	MCQ's	4
TOPIC: IDEOLOGY										
2	Week-2	Definition and Significance of Ideology	Define ideology	C1			Interactive Lecture/SGD	2	MCQ's	4
3			Explain the significance of ideology for a nation.	C2						
4	Week-3	Islamic way of life	Explain the concept of sovereignty of Allah in Islam	C2			Interactive Lecture/SGD	2	MCQ's	4
5			Explain how the guiding principles of Islamic way of life (justice,equality and brotherhood) form the basis of Pakistan's ideology.	C2						
6	Week-4	Role of Sir sayed Ahmad Khan in ideology of Pakistan	Explain the contribution of Sir Sayed Ahmad khan.	C2			Interactive Lecture/SGD	2	MCQ's	4
7	Week-5	Role of Allama Muhammad Iqbal in ideology of Pakistan	Explain the contribution of Allama Muhammad Iqbal in ideology of Pakistan (with referece to Allama Iqbal's 1930 Allahabad Address)	C2			Interactive Lecture/SGD	2	MCQ's	4
8	Week-6	Role of Quaid –i-Azam in ideology of Pakistan	Explain the contribution of Quaid –i-Azam in ideology of Pakistan (with referece to Quaid's address to the Constituent Assembly on August 11,1947)	C2			Interactive Lecture/SGD	2	MCQ's	4
TOPIC: MUSLIM SEPARATISM										
9	Week-7	Factors leading to Muslim separatism	Discuss the factors that lead to Muslim separation in subcontinent	C2			Interactive Lecture/SGD	2	MCQ's	4
10			Explain the impact of Congress Rule and the Day of Deliverance 1939	C2						
11	Week-8	Pakistan Resolution	Discuss the Pakistan Resolution 1940	C2			Interactive Lecture/SGD	2	MCQ's	4
12			Analyse the importance of the Pakistan Resolution 1940	C2						

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
TOPIC: STATE IN ISLAM										
13	Week-9	Concept of a Welfare State in Islam	Define a welfare state	C1			Interactive Lecture/SGD	2	MCQ's	4
14			Describe the main functions of a welfare state	C2						
15			Compare an Islamic state and welfare state	C2						
16			Discuss the responsibilities of an individual in a welfare state	C2						
17			Discuss Pakistan's current status as a welfare state and suggest what further steps need to be taken.	C2						
TOPIC: PEOPLE AND LAND										
18	Week-10	Indus Civilization	Explain indus civilization in details	C2			Interactive Lecture/SGD	2	MCQ's	4
19		Muslim advent	Discuss the muslim advent in detail.	C2						
20	Week-11	Location and geo-physical features.	Describe the location and geo-physical features of Pakistan	C2			Interactive Lecture/SGD	2	MCQ's	4
21			locate Pakistan with reference to latitudes 24oN-37oN and longitudes 61oE-78oE;	C1						
22			locate the neighbouring countries of Pakistan on the world map (Afghanistan, India, China, Iran)	C1						
23			Explain the strategic importance of the location of Pakistan	C2						
TOPIC: GOVERNMENT AND POLITICS IN PAKISTAN										
24	Week-12	Government and Politics in Pakistan	Explain the need and importance of constitution for a state	C2			Interactive Lecture/SGD	2	MCQ's	4
25			Discuss the salient featur's of Objective Resolution and its significance	C2						
26			Discuss the constitutional phases:1947-58	C2						
27			Discuss the constitutional phases:1958-71	C2						
28	Week-13	Government and Politics in Pakistan	Discuss the constitutional phases:1971-77	C2			Interactive Lecture/SGD	2	MCQ's	4
29			Discuss the constitutional phases:1977-88	C2						
30			Discuss the constitutional phases:1988-99	C2						
31			Discuss the constitutional phases:1999 onward	C2						
TOPIC: CONTEMPORARY PAKISTAN										
32	Week-14	Economic institutions and issues	Discuss the economic institutions and issues in Pakistan	C2			Interactive Lecture/SGD	2	MCQ's	4
33		Society and social structure	Discuss the Society and social struture.	C2						
34		Ethnicity	Discussion vastness of ethnicity in Pakistan	C2						



S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/ Hours	Assesment	No of Items
				C	P	A				
35	Week-15	Foreign policy of Pakistan and challenges	Define the determinants of Pakistan's foreign policy;	C2			Interactive Lecture/SGD	2	MCQ's	4
36			Discuss Pakistan relations with immediate neighboring states?	C2						
37			Explain Pakistan's role in the region as an active member of SAARC	C2						
38			Describe Pakistan's relations with China and USA	C2						
39	Week-16	Futuristic outlook of Pakistan	Discuss the futuristic outlook of Pakistan in details	C2			Interactive Lecture/SGD	2	MCQ's	4

PMS-606 COMPUTER SKILLS 2(1-1)

Course Description

This is an introductory course on Information and Communication Technologies. Topics include ICT terminologies, hardware and software components, the internet and world wide web, and ICT based applications.

Cognitive Domain

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

1. Describe numerical, alphabetic, and alpha numeric data
2. Describe Arithmetic Logic Unit – ALU
3. Discuss types of system soft-ware including operating system and translators
4. Describe basic concept of MS word and power point

Skills Domain

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

1. Examine the different parts of compound microscope and perform basic staining techniques.
2. Demonstrate how to use search engines independently
3. Perform automatic series generation, automatic calculations

Affective Domain

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

1. Demonstrate 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-606 COMPUTER SKILLS 2(1-1)

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
TOPIC: INTRODUCTION TO COMPUTER										
1	Week-1	Basic Definitions & Concepts	Define Computer	C1			Interactive Lecture/SGD	2	MCQ's	9
2			Define Data	C1						
3			Explain numerical, alphabetic, and alpha numeric data	C2						
TOPIC: DATA AND INFORMATION										
4	Week-2	Data, information Processing	Define Information	C1			Interactive Lecture/SGD	2	MCQ's	9
5			Distinguish between data and information	C4						
6			Explain data processing	C2						
TOPIC: BASIC UNITS OF COMPUTER										
7	Week-3	Input, output, memory , ALU, Control Unit	Define Input and output Unit	C1			Interactive Lecture/SGD	2	MCQ's	9
8			Discuss memory	C2						
9			Explain Arithmetic Logic Unit – ALU	C2						
10			Discuss control unit	C2						
TOPIC: LANGUAGE AND NUMBER SYSTEM										
11	Week-4	Characteridtic, Laguage	Enlist characteristics of computer	C1			Interactive Lecture/SGD	2	MCQ's	9
12			Define Languages in computer	C2						
13			Discuss the number system	C2						
TOPIC: SYSTEM SYSTEM AND APPLICATION SOFTWARE										
14	Week-5	Software,operating system, Virus	Define software and its types	C1			Interactive Lecture/SGD	2	MCQ's	9
15			Discuss types of system soft-ware including operating system and translators	C2						
16			Explain the application soft-ware i.e. general and specific purpose software	C2						
17			Explain computer virus and its types	C2						
TOPIC: INTERNET AND SECURITY										
18	Week-6	Netwok	Explain computer network and its types	C2			Interactive Lecture/SGD	1	MCQ's	4
19		installation	Demonstrate step by step antivirus installation and up gradation under supervision		P3		Demo	1	OSPE	4
20		email	Perform to use internet and email independently		P4					
21		search engine	Demonstrate how to use search engines independently		P4					

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
TOPIC: MS WORD										
22	Week-7	interface, ribbon	Define MS word and its interface	C1			Interactive Lecture/SGD	2	MCQ's	9
23			Discuss ribbon and its parts	C2						
24		toolbar	Discuss use of office button, save, save as and quick access toolbar	C3						
25	Week-8	Home tab, commands	Demonstrate home tab, its groups and commands		P3		Demo	2	OSPE	9
26			Perform how to cut, copy, paste, bold, italic, font type and size the text undersupervision		P3					
27			Demonstrate text highlighting, text color and text formatting undersupervision		P3					
28			Observe text alignment, bullets, borders, shading and sorting		P1					
29			Demonstrate the insert tab, its groups and commands undersupervision		P3					
30			Observe to make cover page, blank page, page break, page numbers		P1					
31	Week-9	Smart art	Prepare tables, pictures, clip arts, shapes, headers and footers, smart art and charts independently		P4		Demo	2	OSPE	9
32			Perform to make text box, word art, drop cap and symbols independently		P4					
33			Demonstrate to make page layout tab its groups and commands independently		P4					
34	Week-10	Themes	Make themes, colors, fonts and effects margins, orientations, size and columns independently		P4		Demo	2	OSPE	9
35			Perform water mark, page color and page boarders on a document independently		P4					
3TOPIC: MS POWER POINT										
36	Week-11	Group command	Describe home tab, its groups and commands	C2			Interactive Lecture/SGD	1	MCQ's	4
37			Discuss tab its groups and command	C2						
38		MS Power point , interface	Discuss MS Power Point and its Interface	C2			Demo	1	OSPE	4
			Demonstrate home tab, its groups and commands		P3					

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/Hours	Assesment	No of Items
				C	P	A				
39	Week-12	New slide, reset, header footer, Art	Observe to prepare new slide, reset and delete slide		P1		Demo	2	OSPE	9
40			Prepare tables, pictures, clip arts, shapes, smart art and charts independently		P4					
41			Insert text box, header, footer, word art, movie and sound independently		P4					
42	Week-13	Slide oreintation	Prepare page setup, slide orientations and themes		P4		Demo	2	OSPE	9
43			Prepare background styles and hide background graphics independently		P4					
44			Insert animation tab its groups and commands indepentdently		P4					
45			Custom animations and transitions indepentdently		P4					
46	Week-14	Group and commands	Put transition's sound and speed indepentdently		P4		Demo	2	OSPE	9
47			Demonstrate slide show tab its groups and commands independently		P4					
48			Demonstrate slide show from beginning, from current slide and custom slide show independently		P4					
49			Setup slide show and hide slides independently		P4					
TOPIC: MS EXCEL										
50	Week-15	Cell, rows, columns and sheets	Define cell, rows, columns and sheets	C1			Interactive Lecture/SGD	2	MCQ's	9
51			Explain formula	C2						
52			Discuss cell styles, sort and filter, find and select	C2						
53			Discuss how to merge cells, conditional formatting, format as table	C2						
54	Week-16	Series generation, automatic calculations	Demonstrate to Prepare DMCs and merit lists		P4		Demo	2	OSPE	9
55			Observe automatic series generation, automatic calculations`		P1					
56			Participate in class discussion			A				
57			Show respect towards teachers and fellows			A				

Recommended Text Books

MEDICAL BIOCHEMISTRY-I

- 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-I

- 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-1

- 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-I

- Practical English Grammar by A.J. Thomson and A.V. Martinet. Exercises 2. Third edition. Oxford University Press 1986. ISBN 0 19 431350 6.
- Reading. Advanced. Brian Tomlinson and Rod Ellis. Oxford Supplementary Skills. Third Impression 1991. ISBN 0 19 453403 0.

PAKISTAN STUDIES

- Akbar, S. Zaidi. Issue in Pakistan's Economy. Karachi: Oxford University Press, 2000.
- Mehmood, Safdar. Pakistan Kayyun Toota, Lahore: Idara-e-Saqafat-e-Islamia, Club Road, nd.
- Amin, Tahir. Ethno - National Movement in Pakistan, Islamabad: Institute of Policy Studies, Islamabad.
- Afzal, M. Rafique. Political Parties in Pakistan, Vol. I, II & III. Islamabad: National Institute of Historical and cultural Research, 1998.

COMPUTER SKILLS

- Computer science by Muhammad Ashraf, edition 1st 2010



