



KHYBER MEDICAL UNIVERSITY

HEALTH TECHNOLOGY CURRICULUM

STUDY GUIDE SEMESTER 6

16 Weeks Activity Planner

2024-25

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

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Team for TOS Development

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Vision & Mission

Khyber Medical University (KMU) Vision:

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

Khyber Medical University (KMU) Mission:

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

Institute of Paramedical Sciences Peshawar (IPMS-PESH) Mission:

To produce allied health professionals who excel in their skills, research, compassionate care, and community involvement, thereby enhancing the healthcare system

Program Introduction

The BS Health Technology is a rigorous four-year degree program designed to equip students with the expertise required to excel in the dynamic healthcare industry. This program integrates fundamental Basic medical sciences, Clinical medicine, and surgical subjects to provide a comprehensive education. Curriculum begins with essential Basic medical sciences, including anatomy, physiology, biochemistry, microbiology, etc., forming a solid foundation for understanding human health and disease. Progressing into Clinical medicine, students acquire in-depth knowledge and practical skills in diagnostics, patient care, and therapeutic interventions through hands-on Clinical practicums. Combining theoretical instruction with practical training, the BS Health program ensures graduates are well-prepared to meet the challenges of the healthcare industry. Graduates will be proficient in the latest health technologies and capable of providing high-quality support in Clinical and surgical settings. BS in Health Technology paves the way for diverse career opportunities across various sectors, including hospitals, clinics, research institutions, and healthcare technology firms. Furthermore, this degree provides a strong foundation for those seeking to pursue advanced studies and specialization in health sciences, ensuring a broad spectrum of professional growth and development possibilities.

Objectives

By the end of the BS Health Degree, the students will be able to:

Cognitive Domain

1. The cognitive learning domain of BS Health Technology focuses on creating mental skills to enable a students to acquire knowledge.
2. The learning process assumes a hierarchical structure in the cognitive domain that entails information processing, comprehension, applying knowledge, problem-solving, and undertaking research.
3. Students will get the theoretical underpinnings, analytical skills, and creative thinking required to succeed in the fast-paced industry of health technology.
4. By means of demanding academic programs and hands-on training, they will be equipped to assess intricate medical data, incorporate multidisciplinary expertise, and make knowledgeable choices that improve patient care and healthcare results.

Psychomotor Domain

1. Psychomotor Encourage students to precise for physical movement and the use of motor skills like coordination and posture.
2. This area entails the development of practical technical skills that allow students to perform Clinical and surgical operations accurately and proficiently.
3. Students will gain confidence and proficiency in operating sophisticated medical equipment, performing delicate surgical procedures, and providing direct patient care via comprehensive hands-on training and simulation exercises.
4. Mastery of these skills ensures that graduates are well-prepared to meet the high standards of Clinical practice and contribute effectively to patient health and safety.

Affective Domain

1. Include the critical attitudes, values, and professional behaviors that students are supposed to develop during the program are included in the emotional domain.
2. This domain focuses on developing students' interpersonal, ethical, and emotional intelligence, all of which are critical for providing patient-centered and compassionate care. Students' empathy, cultural sensitivity, and ethical responsibility will grow through immersive learning experiences and reflective practice.
3. They will get knowledge on how to properly communicate with patients, families, and medical teams. They will also learn how to stand out for patient rights and make a

commitment to their professional and lifetime learning.

4. This all-encompassing development guarantees that graduates not only possess superior technical skills but also exhibit the humanistic traits essential to the provision of excellent healthcar

6th Semester Subjects for BS Health Technology

S. No	Subjects	Course code	Credit Hrs.	Duration
1	Basic Surgical Skills	BHS-605	3 (2+1)	16 weeks
2	Primary Health Care	BHS-606	3 (2+1)	16 weeks
3	Infectious Disease	BHS-607	3 (2+1)	16 weeks
4	Pre & post-operative	BHS-608	3 (2+1)	16 weeks
5	Basics of Neurology	BHS-609	3 (2+1)	16 weeks
6	Nutritional & Endocrine Disorders	BHS-610	3 (2+1)	16 weeks

BHS-605 Basic Surgical Skills 3(2+1)

Course Description

This course has been designed to equip the students with professional knowledge, skills, techniques, and ethical values to enable them to apply their acquired expertise in primary health care units and in hospital wards and minor OT as well, and to know the basic principles of skin incision, wound closure, drainage, diathermy, a handheld scalpel machine, aseptic technique, etc.

Learning Objectives

Cognitive Domain

By the end of this course, students should be able to

1. Obtained relevant information through the basic surgical skills of incision, wound closure, and drainage
2. Analyzing and synthesizing data to know aseptic technique in the surgical area.
3. identifying basic principles for operating a hormonal scalpel machine.

Psychomotor Domain

By the end of this course, students should be able to

1. Identify different skin incision
2. Apply how to use different drain and tubes
3. Assessment and apply diathermy principle
4. Exercise to know about operating room attire and scrubbing technique

Affective Domain

By the end of this course, students should be able to

1. comply to SOP for skin incision
2. comply to SOPs for Aseptic technique
3. comply to SOPs for diathermy
4. comply to SOPs for harmonic scalpel machine.

TABLE OF SPECIFICATIONS

TOS-BASIC SURGICAL SKILLS 3(2+1)

S.No	Weeks	Contents	Learning Outcome	Domain			MIT's	Time/Hours	Assessment	No of Items
				C	P	A				
TOPIC: SKIN INCISION										
1	Week-1	Introduction	Introduce skin incisions	C1			Interactive Lecture/SGD	2	MCQs	3
2		Anatomy and Physiology of the Skin	Discuss the anatomy and physiology of the integument.	C1						
3		Surgical landmark	Explain the surgical hallmark of the abdomen incision.	C1						
4		Abdomen	Discuss the incision of the abdomen	C2						
5		Types	Enlist types of abdomen incisions	C1						
6		Neck	Discuss the incision in the neck.	C2						
7		Thoracoabdominal	Discuss the incision of the Thoracoabdominal	C2						
11		Practical performance	Perform practical demonstration of skin incision on simulators		P4	Demo	1	OSPE/OSCE		
12		Comply to SOPs	Comply to SOPs for Simulator for skin incisions		A4	Role Play				
TOPIC: WOUND CLOSURE & SUTURE MATERIAL										
13	Week-2	Introduction	Introduce the wound and wound closure.	C1			Interactive Lecture/SGD	2	MCQs	4
14		Types	Enlist types of wound healing	C1						
15		Suture material	Describe Suture material and characteristics	C2						
16		Suture Characteristics	Explain the characteristics of suture material.	C2						
17		Suture Technique	Discuss different suture techniques.	C2						
18		Knotting Technique	Discuss the knotting technique.	C2						
19		Alternative to suture	Describe alternative methods to suture	C3						
20		Practical performance	Hands-on practice sessions with suturing models or simulators		P4	Demo	1	OSPE/OSCE		
21		Comply to SOPs	Comply to SOPs for Simulator or suturing models		A4	Role Play				
TOPIC: NEEDLE AND DRAIN										
21	Week-3	Introduction	Introduce needles	C1			Interactive Lecture/SGD	2	MCQs	4
22		Types	Enlist different types of needles	C1						
23		Structure	Discuss different parts of the needles	C2						
24		Placement of the needle in the needle holder	Discuss the placement of the needle in the needle holder.	C2						
25		Definition	Define drain	C1						

26		Uses	Discuss the uses of different Specialized drains.	C3					
27		Principle	Describe the principle of drain.	C3					
28		Removal	Explain the removal of a drain	C3					
29		Practical performance	Practical Demonstration of different types of Needle and Holders		P4	Demo	1	OSPE/OCE	
30		Handling of needles and holders	Adopt how to take care of needles and holders		A4	Role Play			

TOPIC: DIATHERMY MACHINE

31	Week-4	Introduction	Introduce Diathermy	C1		Interactive Lecture/SGD	2	MCQs/SEQs	2
32		Principle	Discuss the principle of diathermy	C1					
33		Effect	Explain the effect of diathermy	C3					
34		Complications	Enlisting complications of diathermy	C1					
36		Practical performance	Video demonstration of the diathermy machine		P4	Video	1	OSPE/OSCE	
37		Comply to SOPs	Comply to SOPs for the use of diathermy machine		A4	Role Play			

TOPIC: DRESSINGS

38	Week-5	Introduction	Define dressing	C1		Interactive Lecture/SGD	2	MCQs/SEQs	4
39		Function	Identify the functions of surgical site dressings	C2					
40		Types	Enlist different types of dressings	C1					
41		Application of Dressings	Explain the steps in applying dressings	C3					
42		Complications	Enlist Complications of Dressings	C2					
43		Practical performance	Perform practical demonstration of sterile dressing techniques		P4	Demo	1	OSPE/OSCE	
44		Counseling	Counseling of patient for Sterile Dressing Technique		A4	Role Play			

TOPIC: ASEPTIC TECHNIQUE

45	Week-6	Introduction	Define the aseptic technique	C1		Interactive Lecture/SGD	2	MCQs/SEQs	5
46		Principles	Identify the key principles of aseptic technique	C2					
47		Preparation	List the steps in preparing for aseptic	C2					
48		Aseptic hand hygiene	Define aseptic hand hygiene	C2					
49		Personal Protective Equipment (PPE)	Identify the different types of PPE used in aseptic technique.	C2					
50		Complications	Describe the complications of unhygienic approaches	C3					
52		Handling sterile equipment	Explain the methods of handling sterile equipment	C2					
53		Practical performance	Demonstrate proper donning and doffing of PPE						
54		Comply to SOP	comply to SOPs for Donning and doffing of PPE		A4	Role Play			

TOPIC: STERILIZATION AND DISINFECTION

55	Week-7	Definition	Define sterilization and disinfection.	C1		Interactive Lecture/SGD	2	MCQs/SEQs	6
56		Types	list of different sterilization methods	C1					

57		Principles	Discuss the difference between sterilization and disinfection	C2					
58		Uses	Explain the Clinical uses of sterilization and disinfectant	C3					
59		Level of Disinfection	Discuss the different levels of Disinfection	C2					
60		Practical performance	Demonstrate the use of an autoclave for sterilization		P4	Demo	1	OSPEOSCE	
61		Comply to SOPs	comply to SOPs for Autoclave machine		A4	Role Play			

TOPIC: URETHRAL CATHETERS

62	Week-8	Definition	Define urethral Catheters	C1		Interactive Lecture/SGD	2	MCQs/SEQs	5
63		Types	Enlist types of urethral Catheters	C1					
64		Composition	Discuss the composition of the Urethral catheters	C2					
65		Uses	Explain the different uses of urinary catheters	C3					
66		Complications	Enlist complication of urinary catheters	C2					
67		Practical performance	Practical demonstration of a urinary catheter on Dummy		P4	Demo	1	OSPE/OSCE	
68		Counseling	Counseling of patient for urinary catheter		A4	Role Play			

TOPIC: SPLINTS

69	Week-9	Introduction to Splints	Define splints	C1		Interactive Lecture/SGD	2	MCQs/SEQs	4
70		Types	Enlist types of splints	C1					
71		Materials	Discuss common materials used for splints	C2					
72		Applications	Describe the uses of splints in fracture management and soft tissue injuries	C3					
73		Techniques	Explain application and removal techniques of splints	C2					
74		Factors	Discuss factors that affect splint selections	C3					
75		Practical performance	Practical demonstration of the splint technique		P4	Demo	1	OSPE/OSCE	
76		Comply to SOPs	Comply to SOPs for splint technique		A4	Role Play			

TOPIC: SUCTION

77	Week-10	Definition	Define Suction	C1		Interactive Lecture/SGD	2	MCQs/SEQs	5
78		Types	Enlist types of suction systems	C2					
79		Component	Explain the different components of the suction system	C2					
80		Uses	Discuss surgical as well as emergency applications	C3					
81		Complications	Enlisting complications of suction	C1					
82		Practical Performance	Perform practical demonstration of suction on Dummy		P4	Demo	1	OSPE/OSCE	
83		Comply to SOPs	Comply to SOPs for Suction machine		A4	Role Play			

TOPIC: SYRINGES

84	Week-11	Introduction	Introduce Syringes	C1		Interactive Lecture/SGD	2	MCQs/SEQs	5
85		Component	Discuss the different parts of syringes	C2					
86		Types	Explain the different types of syringes	C1					

87		Uses	Explain the uses of syringes	C3					
88		Needle attachment	Explain needle attachment	C2					
89		Practical performance	perform the practical performance of phlebotomy		P4	Demo	1	OSPE/OSCE	
90		Comply to SOPs	Comply to SOPs for the Phlebotomy procedure		A4	Role Play			

TOPIC: GAUZE SPONGES

91	Week-12	Introduction	Introduce Gauze sponges	C1		Interactive Lecture/SGD	2	MCQs/SEQs	4
92		Types	Enlist Different Types of Gauze Sponges	C1					
93		Size and Shape	Discuss the size and shape of Gauze sponges	C2					
94		Abdominal dressing	Explain abdominal dressing.	C2					
95		Eye pad and eye shield	Explain Eye Pad and Eye Shield	C2					
96		Occlusive Dressings	Explain occlusive dressings	C2					
97		Practical performance	Practical Demonstration of different types of gauze sponges		P4	Demo	1	OSPE/OSCE	
98		Handling of gauze sponges	Adopt how to take care of gauze sponges		A4	Role Play			

TOPIC: SOME SPECIFIC WOUND

99	Week-13	Definition	Define Wound	C1		Interactive Lecture/SGD	2	MCQs/SEQs	4
100		Causes	Discuss Different causes of wounds	C1					
101		Specific Types	Enlist Some Specific Types of Wounds	C2					
102		Acute Management	Explain the acute management of wounds.	C3					
103		Complications	Enlist complication of wound	C3					
104		Practical performance	Perform practical demonstration of wound washing Using sterile technique		P4	Demo	1	OSPE/OSCE	
105		Counseling	Counseling of patient for Sterile wound washing		A4	Role Play			

TOPIC: NASO-GASTRIC (NG) TUBE

106	Week-14	Introduction	Introduce NG tube insertion	C1		Interactive Lecture/SGD	2	MCQs/SEQs	5
107		Types	Enlist different types of NG tubes	C1					
108		Preparation	Discuss pre-insertion preparation	C2					
109		Insertion	Explain NG tube insertion	C3					
110		Maintenance	Discuss the care of NG tube maintenance	C3					
111		Complications	Enlist complications of NG tube insertion	C3					
112		Practical performance	Video demonstration of NG tube catheterization		P4	Demo	1	OSPE/OSCE	
113		Comply to SOPs	comply to SOPs for NG tube insertion		A4	Role Play			

TOPIC: ANESTHESIA

114	Week-15	Introduction	Introduce anesthesia	C1		Interactive Lecture/SGD	2	MCQs/SEQs	5
115		Phases	Discuss the different phases of anesthesia	C2					

116		Types	Enlist different types of anesthesia	C1					
117		Procedure performed	An extensive procedure performed under the use of different types of anesthesia	C3					
118		Advantages and disadvantages	Discuss the advantages and disadvantages of different types of anesthesia	C3					
119		Practical performance	Perform practical demonstration for IV cannulation for anesthesia		P4	Demo	1	OSPE	
120		Comply to SOPs	Comply to SOPs for IV cannulation		A4	Role Play			

TOPIC: AIRWAYS

121	Week-16	Introduction	Introduce Airways	C1		Interactive Lecture/SGD	2	MCQs/SEQs	5
122		Types	Enlist different types of airways	C2					
123		Insertion technique	Discuss the insertion technique for different airways	C3					
124		Complications	Enlist complication of Airways	C3					
125		Management	Build a treatment plan for airway management	C4					
126		Practical performance	Practical demonstration of different types of airways		P4	Demo	1	OSPE/OSCE	
127		Comply to SOPs	Comply to SOPs for the various airways		A4	Role Play			

Recommended Books

1. Nancy Marie Phillips, 11th edition. Berry Kohn's Operating Room Technique.
2. 25th Edition volume 1. Bailey and love's Short practice of surgery

S.No	Topics	No of MCQS	OSPE/OSCE Station	Interactive or Statics
1.	SKIN INCISION	3	Perform practical demonstration of skin incision on simulators	Interactive
2.	WOUND CLOSURE & SUTURE MATERIAL	4	Hands-on practice sessions with suturing models or simulators	Interactive
3.	NEEDLE AND DRAIN	4	Practical Demonstration of different types of Needle and Holders	Interactive
4.	DIATHERMY MACHINE	2	Demonstration of diathermy machine	static
5.	DRESSINGS	4	Perform practical demonstration of sterile dressing techniques	Static
6.	ASEPTIC TECHNIQUE	5	Demonstrate proper donning and doffing of PPE	Interactive
7.	STERILIZATION AND DISINFECTION	6	Demonstrate the use of an autoclave for sterilization	Static
8.	URETHRAL CATHETERS	5	Practical demonstration of a urinary catheter on Dummy	Static
9.	SPLINTS	4	Practical demonstration of the splint technique	Interactive
10.	SUCTION	5	Perform practical demonstration of suction on Dummy	Static
11.	SYRENGES	5	perform the practical performance of phlebotomy	Static
12.	GAUZE SPONGES	4	Practical Demonstration of different types of gauze sponges	Static
13.	SOME SPECIFIC WOUND	4	Perform practical demonstration of wound washing Using sterile technique	Static
14.	NASO-GASTRIC (NG) TUBE	5	demonstration of NG tube catheterization	Static

15.	ANESTHESIA	5	Perform practical demonstration for IV cannulation for anesthesia	Static
16.	AIRWAYS	5	Practical demonstration of different types of airways	Static
Total = 16		Total = 70	Total OSPE/OSCE Station= 20 1. (Interactive & Static) = 14 2. Rest station=6	

BHS 606 Primary Health Care 3(2+1)

Course Description

This course provides an in-depth understanding of Primary Health Care (PHC), focusing on its principles, organization, and the integration of health education and behavioral health into PHC systems. Students will explore national and international health care frameworks, with a specific emphasis on Pakistan's health programs. The course also addresses health promotion, community-based approaches, and the challenges and innovations shaping the future of PHC. Through global case studies and practical approaches, learners will gain the knowledge and skills to develop and evaluate PHC programs, contributing to the creation of healthier communities.

Learning Objectives

Cognitive Domain

By the end of this course, students should be able to

1. Define the concept and principles of Primary Health Care
2. Explain the organization and structure of PHC services at national and international levels
3. Analyze the integration of behavioral health and PHC systems
4. Evaluate health promotion, preventive approaches, and community-based models of PHC

Psychomotor Domain

By the end of this course, students should be able to

1. Develop plans for implementing national health programs within a PHC framework.
2. Design community-based health promotion and preventive care initiatives.
3. Demonstrate skills in monitoring and evaluating PHC programs.
4. Create practical solutions to address primary care problems using multi-level approaches.

Affective Domain

By the end of this course, students should be able to

1. Value the role of PHC in achieving equitable health outcomes.
2. Advocate for the integration of behavioral and physical health in primary care.
3. Demonstrate empathy and cultural sensitivity when addressing community health needs.

TABLE OF SPECIFICATIONS

TOS-PRIMARY HEALTH CARE 3(2+1)

S.No	Weeks	Contents	Learning Outcome	Domain			MIT's	Time/Hours	Assessment	No of Items
				C	P	A				
TOPIC: INTRODUCTION TO PRIMARY HEALTH CARE (PHC)										
1	Week-1	Definition	Define primary health care	C1		Interactive Lecture/SGD	2	MCQs		
2		Importance	Explain the importance of primary health care	C2						
3		Components	List the components of primary health care	C1						
4		Practical performance	Demonstrate component of PHC through design charts		P4	Demo	1	OSPE/OSCE		
5		SOPs compliance	Adopt how to take care of charts and models		A4	Role Play				
TOPIC: PRINCIPLES OF RIMARY HEALTH CARE (PHC)										
6	Week-2	Introduction	Define principles of PHC	C1		Interactive Lecture/SGD	2	MCQs		
7		Principles	Explain the principles of primary health care	C2						
8		historical development	Discuss the historical development of primary health care.	C2						
9		Practical performance	Practically Demonstrate Interpectoral coordination with help of Chart		P4	Demo	1	OSPE/OSCE		
10		Counselling	Adopt how to care of effective communication		A4	Role Play				
TOPIC: ORGANIZATION OF PRIMARY HEALTH CARE SERVICES										
11	Week-3	Introduction	Define organization of PHC	C1		Interactive Lecture/SGD	2	MCQs		
12		Identify components	Identify components of an effective primary health care system	C2						
13		Evaluate challenges	Evaluate challenges in organizing primary health care services	C3						
14		Practical performance	Demonstrate how to prioritize services based on principles of PHC (e.g., equity, accessibility)		P4	Demo	1	OSPE/OSCE		
15		SOPs compliance	Adopt how to give Value to appropriate attitudes, respect, and empathy when engaging with community members		A4	Role Play				
TOPIC: HEALTH EDUCATION IN PHC										
16	Week-4	Definition	Define health education and its importance in primary health care.	C1		Interactive Lecture/SGD	2	MCQs		
17		Importance of health education	Discuss the Importance of health education in PHC	C2						
18		methods of delivering effective health education	Describe methods of delivering effective health education	C3						
19		Practical performance	Practical demonstration of proper hand washing		P4	Demo	1	OSPE/OSCE		
20		Counseling	Counseling of patient for proper hand washing		A4	Role Play				
TOPIC: NATIONAL PROGRAMS IN PAKISTAN										
21	Week-5	Introduction	Introduce National Programs in Pakistan	C1		Interactive Lecture/SGD	2	MCQs		
22		National and international health care systems	Compare national and international health care systems.	C2						

23		the role of international organizations	Discuss the role of international organizations (e.g., WHO, UNICEF) in promoting global health	C3					
24		Practical performance	practical performance of proper syringe disposal		P4	Demo	1	OSPE/OSCE	
25		SOPs compliance	Adopt how to take care of needle disposal containers		A4	Role Play			
TOPIC: INTEGRATION OF BEHAVIORAL & PHC CARE									
26	Week-6	Definition	Define the integration concepts	C1		Interactive Lecture/SGD	2	MCQs	4
27		Role of behavioral health care	Explain the role of behavioral health in PHC	C2					
28		Integration	Identify real-world examples of integration	C3					
29		benefits and challenges	Analyze the benefits and challenges of integration	C3					
30		Practical performance	Practical Demonstration of deep breathing technique for managing stress		P4	Demo	1	OSPE/OSCE	
31		Counseling	Counseling of patient for prioritize deep breathing as a primary technique for managing stress		A4	Role Play			
TOPIC: HEALTH PROMOTION AND PREVENTIVE APPROACH									
32	Week-7	Introduction	Define health promotion	C1		Interactive Lecture/SGD	2	MCQs/SEQs	5
33		Principles	Enlist key principles of health promotion	C1					
34		Preventive approaches	Discuss examples of preventive approaches	C2					
35		Preventive strategies	interpret preventive strategies to a case study	C3					
36		Effectiveness	Discuss the effectiveness of prevention in PHC	C2					
37		Practical performance	Demonstrate the process of administering a vaccine, ensuring correct technique, hygiene practices		P4	Demo	1	OSPE	
38		SOPs compliance	Adopt how to take care of vaccine		A4	Role Play			
TOPIC: COMMUNITY-BASED APPROACH OF PHC									
39	Week-8	Definition	Define Community-Based Approach of PHC	C1		Interactive Lecture	2	MCQs/SEQs	5
40		Community Health Needs Assessment	Describe methods for assessing community health needs and setting priorities	C2					
41		Community engagement	Explain strategies for engaging community members in health programs	C2					
42		Community Engagement and Participation	Discusses the role of community leaders	C2					
43		Implementation of Community-Based Health Programs	Compare challenges and solutions for implementing community-based health programs	C3					
44		Practical performance	Demonstrate the process of conducting health screening, such as blood pressure or cholesterol check		P4	Demo	1	OSPE	
45		Counseling	Counseling of the patients for prioritizing regular health screenings routine		A4	Role Play			
TOPIC: MONITORING AND EVALUATION OF PHC PROGRAMS									
46	Week-	Introduction	Define monitoring and evaluation (M&E)	C1		Interactive	2	MCQs/SEQs	

47	9	Importance	Discuss the importance of monitoring and evaluation (M&E)	C1		Lecture/SGD			5
48		Types	Enlist types of monitoring and evaluation (M&E)	C1					
49		Explanation	Explain tools used for M&E in PHC	C2					
50		Compare M&E methods	Compare M&E methods in different PHC settings	C3					
51		Practical performance	Demonstrate the process of collecting data for analysis		P4	Demo	1	OSPE/OSCE	
52		SOPs compliance	Adopt how to take care of privacy of data		A4	Role Play			

TOPIC: CHALLENGES OF PHC

53	Week-10	Introduction	Introduce PHC challenges	C1		Interactive Lecture/SGD	2	MCQs/SEQs	3	
54		Types	List common challenges faced by PHC	C1						
55		Affecting Barriers	Summarize barriers to effective PHC delivery	C2						
56		Causes of PHC challenges	Describe solutions to address these challenges	C2						
57		Practical performance	Demonstrate the identification of common challenges in Primary Health Care		P4	Demo	1	OSPE/OSCE		
58		Counselling	Counseling of participants for prioritizing solutions of PHC challenges		A4	Role Play				

TOPIC: INNOVATION AND FUTURE OF PHC

59	Week-11	Introduction	Introduce innovation in PHC	C1		Interactive Lecture/SGDs	2	MCQs/SEQs	4	
60		Role of Innovation	Explain Role of Innovation in PHC	C2						
61		Impact of technology	Describe the impact of technology on PHC	C2						
62		Innovative tools	Characterize innovative tools to PHC scenarios	C3						
63		Risks	Assess the potential risks of new PHC innovations	C3						
64		Practical performance	Demonstrate making plan innovative PHC strategies		P4	Demo	1	OSPE/OSCE		
65		SOPs compliance	Adopt how to take care of charts and models		A4	Role Play				

TOPIC: GLOBAL PHC CASE STUDIES

66	Week-12	Overview	Introduce the key details from global case studies	C1		Interactive Lecture/SGD	2	MCQs/SEQs	3	
67		Challenges	Identify the challenges in Global PHC Systems	C1						
68		Compare case studies	Compare different case studies of PHC	C2						
69		Innovations	Evaluate innovative strategies in PHC from global case studies and their impact on service delivery	C3						
70		Practical performance	Demonstrate the water quality testing methods		P4	Demo		OSPE/OSCE		
71		SOPs compliance	Adopt how to take care of clean water for community well-being		A4	Role Play				

TOPIC: NATIONAL & INTERNATIONAL HEALTH CARE SYSTEMS

72	Week-13	Introduction	Define national and international health care systems	C1		Interactive Lecture/SGD	2	MCQs/SEQs	5	
73		Component	List Component of national and International HCS	C1						
74		Primary Health Care Principles	Explain the principles of primary health care in different systems	C2						
75		National Health Care	Compare different national health care models	C3						

		Models							
76		Health System Challenges	Identify challenges faced by health care systems in developed and developing countries	C1					
77		Practical performance	Demonstrate the comparison of national and international healthcare systems focusing on structures		P4	Demo	1	OSPE	
78		Counselling	counselling strategies to advocate national and international healthcare systems practicing in their own communities		A4	Role Play			

TOPIC: HEALTH CARE SYSTEM OF PAKISTAN

79	Week-14	Introduction	Introduce Health Care System of Pakistan	C1		Interactive Lecture/SGD	2	MCQs/SEQs	4
80		Importance of public sector	Explain importance of Public sector in Pakistan is state controlled	C2					
81		Health Care Financing	Understanding Health Care Financing	C2					
82		Importance of private sector	Explain importance of Private sector	C2					
83		Practical performance	Video Demonstration of proper drug storage and handling		P4	Video Demo	1	OSPE/OSCE	
84		SOPs compliance	Comply Sops for Video demonstration of drug storage		A4	Role Play			

TOPIC: THE ECONOMY OF PHC

85	Week-15	Introduction	Introducing the Economy of PHC	C1		Interactive Lecture/SGD	2	MCQs/SEQs	4
86		Importance of Economy of PHC	Explain the importance of Economy of PHC	C2					
87		Operational strategies to improve effectiveness	Discuss Operational strategies to improve effectiveness at low cost	C2					
88		Practical performance	Demonstrate different surveillance technique		P4	Demo	1	OSPE/OSCE	
89		SOPs compliance	Demonstrate participant to appreciate and uphold the importance of maintaining privacy rights during surveillance		A4	Role Play			

TOPIC: IMPROVING THE HEALTH OF WORLD'S POOR PEOPLE

90	Week-16	Introduction	Explain health system	C1		Interactive Lecture/SGD	2	MCQs/SEQs	3
91		Health for all	Describe the importance of health for all	C2					
92		Health disparities	Explaining Health Disparities	C2					
93		Practical performance	Demonstrate the Approaches for Measuring Progress with the help of color charts, models & videos		P4	Demo	1	OSPE/OSCE	
94		SOPs compliance	Adopt how to take care of charts and models		A4	Role Play			

Recommended Books

1. Primary Health Care: Theory and Practice" by Trisha Greenhalgh.
2. WHO Reports on PHC and Universal Health Coverage

S.No	Topics	No of MCQS	OSPE/OSCE Station	Interactive
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				or Statics
1.	Introduction To Primary Health Care (PHC)	6	Demonstrate components of PHC through design charts	Static
2.	Principles Of Primary Health Care (PHC)	6	Practically Demonstrate Interpectoral coordination with help of Chart	Static
3.	Organization Of Primary Health Care Services	4	Demonstrate how to prioritize services based on principles of PHC	Static
4.	Health Education In PHC	2	Practical demonstration of proper hand washing	Interactive
5.	National Programs In Pakistan	5	practical performance of proper syringe disposal	Interactive
6.	Integration Of Behavioral & PHC Care	4	Practical Demonstration of deep breathing technique	Interactive
7.	Health Promotion And Preventive Approach	5	Demonstrate the process of administering a vaccine	Static
8.	Community-Based Approach Of PHC	5	Conducting a health screening, (blood pressure)	Interactive
9.	Monitoring And Evaluation Of PHC Programs	5	Demonstrate the process of collecting data for analysis	Static
10.	Challenges Of PHC	3	Demonstrate the identification of common challenges in Primary Health Care	Static
11.	Innovation And Future Of PHC	4	Demonstrate making innovative PHC strategies	Static
12.	Global PHC Case Studies	3	Demonstrate the water quality testing methods	Static
13.	National & International Health Care Systems	5	Demonstrate the comparison of national and international health System	Static
14.	Health Care System Of Pakistan	4	Demonstrate proper drug storage and handling	Static
15.	The Economy Of PHC	4	Demonstrate different surveillance technique	Static
16.	Improving The Health Of World's Poor People	4	Demonstrate the Approaches for Measuring Progress with the help of color charts, models	Static
Total Topic=16		Total = 70	Total OSPE/OSCE Station= 20 1. (Interactive & Static) = 14 2. Rest station = 6	

BHS-607 Infectious Disease 3(2+1)

Course Description

This course has been designed to equip the students with professional knowledge, skills, techniques, and ethical values to enable them to apply their acquired expertise in primary health care units and also in hospital wards, to provide a comprehensive understanding of infectious diseases, focusing on patient evaluation, diagnosis, management, and prevention. The goal is to enhance Clinical skills and public health awareness for effective disease control and improved patient care

Learning Objectives

Cognitive Domain

By the end of this course, students should be able to

1. Focuses on enabling students to recall understand, and apply key concepts of infectious diseases, including their diagnosis, treatment, and prevention.
2. Develops analytical skills to differentiate between diseases and interpret Clinical manifestation.
3. Synthesize management plans and evaluate outcomes to enhance decision-making in Clinical and primary health setup.

Psychomotor Domain

By the end of this course, students should be able to

1. Utilize medical technologies for the diagnosis, management, and prevention of infectious diseases.
2. Operate diagnostic equipment and interpret laboratory and imaging data effectively.
3. Use electronic decision-support tools to enhance primary care delivery and infection control.

Affective Domain

By the end of this course, students should be able to

1. Focuses on fostering professional values, ethical responsibility, and a commitment to lifelong learning in managing infectious diseases.
2. Emphasizes empathy, cultural sensitivity, and the importance of primary health initiatives
3. Encouraging students to prioritize infection prevention and compassionate care in diverse settings.

TABLE OF SPECIFICATIONS

TOS-INFECTIOUS DISEASE 3(2+1)

S.No	Weeks	Contents	Learning Outcome	Domain			MIT's	Time/Hours	Assessment	No of Items
				C	P	A				
TOPIC: APPROACH TO THE PATIENT WITH A SUSPECTED INFECTION										
1	Week-1	Systematic approach to assessing patients with suspected infections	Describe the steps involved in patient assessment, including history and physical examination	C1			Interactive Lecture/SGD	2	MCQs	3
2		approach to infection	Discuss the approach to infection assessment and diagnostic methods	C2						
3		Key Clinical signs and diagnostic tests for common infections	Explain Clinical features and diagnostic methods for infections	C2						
4		Applying assessment steps to Clinical scenarios	Apply assessment steps and prioritize diagnostic tests in case scenarios	C3						
5		Infectious disease analysis	Illustrate symptoms, history, and diagnostic results to identify infection and suggest treatments	C4						
6		Practical performance	Demonstrate history taking, General physical examination for Infectious disease		P4	Demo	1	OSPE/OSCE		
7		SOPs compliance	Adopt how to take care of data privacy by demonstrating ethical practices in handling sensitive information		A4	Role Play				
TOPIC: SEPSIS										
8	Week-2	Introduction	Define Sepsis	C1			Interactive Lecture/SGD	2	MCQs	5
9		Pathophysiology & causes	Describe Pathophysiology and common causes of sepsis	C2						
10		Key Clinical Feature	Identify key Clinical signs and symptoms of sepsis	C1						
11		Investigations	Advise investigation for the diagnosis of sepsis	C2						
12		Stages of sepsis	Explain the stages of sepsis, including SIRS, sepsis, severe sepsis, and septic shock, and their Clinical significance	C2						
13		Early recognition	construct knowledge to recognize early signs of sepsis and initiate appropriate interventions	C3						
14		Management	Illustrate management of sepsis	C4						
15		Practical performance	Demonstrate initial management such as fluid resuscitation and antibiotic administration		P4	Demo	1	OSPE/OSCE		
16		SOPs compliance	Adopt how to take care of blood born disease transmission		A4	Role Play				
TOPIC: FEVER AND PYREXIA OF UNKNOWN ORIGIN										
17	Week-3	Introduction	Define fever and Pyrexia of unknown origin	C1			Interactive Lecture/SGD	2	MCQs	4
18		Causes	Describe Cause of fever and Pyrexia of unknown origin	C1						

19		Clinical features	Identify key Clinical feature of fever and Pyrexia of unknown origin	C1					
20		Diagnostic approach	Explain the diagnostic approach and steps for evaluating PUO and fever	C2					
21		Investigation	Advise investigation for the diagnosis of Fever and PUO	C2					
22		Differential diagnosis	construct knowledge of the differential diagnosis of fever and PUO to Clinical scenarios	C3					
23		management of Fever and PUO	Illustrate management of fever and Pyrexia of Unknown origin	C4					
24		Practical performance	Practical demonstration of thermometer to measure body temperature		P4	Demo	1	OSPE/OSCE	
25	SOPs compliance	Comply to SOPs for use of digital or mercury thermometers		A4	Role Play				

TOPIC: WHOOPING COUGH

26	Week-4	Definition	Define Whooping Cough	C1		Interactive Lecture/SGD	2	MCQs	4
27		Clinical features	Identify clinical feature of Whooping cough	C1					
28		Etiology	Describe cause of whooping cough	C2					
29		Investigations	Advise investigation for the diagnosis of whooping cough	C3					
30		Differential diagnosis	construct knowledge of the differential diagnosis of whooping cough	C4					
31		Complications	Enlist complications of whooping cough	C1					
32		Management	Illustrate management for whooping cough	C4					
33		Practical performance	Demonstrate the correct use of personal protective equipment (PPE) when handling a patient with suspected Whooping Cough		P4	Demo	1	OSPE/OSCE	
34		Comply to SOPs	Comply to SOPs for wearing PPE		A4	Role Play			

TOPIC: DIPHTHERIA

35	Week-5	Definition	Define Diphtheria	C1		Interactive Lecture/SGD	2	MCQs	4
36		Clinical features	List Clinical Feature of Diphtheria	C1					
37		Modes of transmission	Enumerate route of transmission of diphtheria	C2					
38		Pathophysiology	Discuss pathophysiology of diphtheria	C2					
39		Investigations	Advise investigation for the diagnosis of diphtheria	C3					
40		Differential diagnosis	Construct knowledge of the differential diagnosis for diphtheria	C4					
41		Complications	List complication of diphtheria	C1					
42		Management	Ensure management for diphtheria	C4					
43		Practical performance	Demonstrate the correct technique for collecting a throat swab for culture		P4	Demo	1	OSPE/OSCE	
44		Comply to SOPs	Adopt how to take care of Collecting throat swab technique		A4	Role Play			

TOPIC: CHOLERA

45	Week-6	Introduction	Introduce cholera	C1		Interactive Lecture/SGD	2	MCQs	5
46		Etiology	Summarize the causative agents referring cholera	C1					
47		Clinical manifestations	Discuss the Clinical features of cholera	C1					
48		transmission of the	Enumerate route of transmission of cholera	C2					

		disease							
49		Pathophysiology	Discuss pathophysiology of cholera	C2					
50		Investigations	Advise investigation for the diagnosis of cholera	C3					
51		Prevention	Discuss various strategies for the prevention of cholera	C3					
52		Complications	Correlate various complications associated with cholera	C2					
53		Management	Recommend pharmacological management for cholera	C4					
54		Practical performance	Demonstrate the preparation of oral Rehydration Solution (ORS)		P4	Demo	1	OSPE/OSCE	
55		SOPs compliance	Adopt how to give value to the importance of preparing and using ORS to prevent dehydration in emergencies		A4	Role Play			

TOPIC: TYPHOID FEVER

56	Week-7	Introduction	Introduce enteric fever	C1		Interactive Lecture/SGD	2	MCQs	4			
57		Clinical Features	Discuss the Clinical features of typhoid fever	C1								
58		Etiology and transmission	Discuss etiology and transmission of typhoid fever	C2								
59		Pathogenesis	Explain pathophysiology of typhoid fever	C2								
60		Diagnostic studies	interpret various laboratory and radiological investigations for the diagnosis of typhoid fever	C3								
61		Differential diagnosis	Construct knowledge of the differential diagnosis for typhoid fever	C4								
62		Treatment	Recommend treatment options for the management of enteric fever	C4								
63		Practical performance	Practical perform cold sponging technique to reduce body temperature		P4					Demo	1	OSPE/OSCE
64		Comply to SOPs	Adopt how to take care of empathetic approach during cold sponging		A4					Role Play		

TOPIC: TETANUS

63	Week-8	Introduction	Introducing tetanus infection	C1		Interactive Lecture/SGD	2	MCQs	4			
64		Clinical Features	Discuss the Clinical features of tetanus	C1								
65		Etiology and transmission	Discuss etiology and transmission	C2								
66		Prophylaxis of tetanus	Identify the steps involved in tetanus prophylaxis	C3								
67		Pathogenesis	Explain pathophysiology of tetanus	C3								
68		Differential diagnosis	Construct knowledge of the differential diagnosis for typhoid fever	C4								
69		Treatment	Recommend treatment options for the management of tetanus	C4								
70		Practical performance	Practical demonstration to Administer the tetanus vaccine following proper protocols		P4					Demo	1	OSPE/OSCE
71		Counselling	Counsel the patients to encourage their active participation in tetanus vaccine		A4					Role Play		

TOPIC: AMEBIC DYSENTERY

72	Week-9	Definition	Define Amebic dysentery	C1		Interactive Lecture/SGD	2	MCQs	4
73		Clinical manifestations	Discuss the Clinical manifestations of Amebic dysentery	C1					

74		causes and transmission	Describe causes and transmission of amebic dysentery	C2					
75		Pathophysiology	Explain the pathophysiology of Amebic dysentery	C2					
76		Investigations	Advise investigation for the diagnosis of amebic dysentery	C3					
77		Differential diagnosis	Construct knowledge of the differential diagnosis for amebic dysentery	C4					
78		Management	Recommend management strategies for Amebic dysentery	C4					
79		Practical performance	Demonstration of proper stool sample collection using a labeled container		P4	Demo	1	OSPE/OSCE	
80		Comply to SOPs	Adopt how to take care of proper labeling to ensure accurate and ethical sample handling		A4	Role Play			

TOPIC: MALARIA

79	Week-10	Introduction	Define malaria	C1		Interactive Lecture	2	MCQs	5
80		Causative agents & Plasmodium life cycle	Describe malarial parasite ,types and Plasmodium life cycle	C1					
81		Clinical Features	Discuss Clinical features of malaria	C1					
82		Pathophysiology	Explain the pathophysiology of Amebic dysentery	C2					
83		investigations	Advise investigations for the diagnosis of malaria	C3					
84		Differential diagnosis	Construct knowledge for the differential diagnosis of malaria	C4					
85		Complications	Discuss various complications associated with malaria	C4					
86		Treatment	Recommend treatment strategies for malaria	C5					
87		Practical performance	Demonstrate RDT for the diagnosis of malaria						
89	Comply to SOPs	Comply to SOPs for the observation of RDT to diagnosis of malaria		A4	Role Play				

TOPIC: MEASLES MUMP RUBELLA

90	Week-11	Definition	Define Measles, Mumps, Rubella	C1		Interactive Lecture	2	MCQs	5				
91		Clinical manifestations	Discuss Clinical features of MMR	C1									
92		Pathophysiology	Explain the pathophysiology of MMR	C2									
93		Investigations	Advise investigations for the diagnosis of MMR	C3									
94		Comparison of the symptoms of MMR	Compare the symptoms of Measles, Mumps, and Rubella	C4									
95		Management	Ensure management for Measles,Mumps,Rubella	C5									
96		Practical performance	Demonstrate RDT for the diagnosis of MMR							P4	Demo	1	OSPE
97		Comply to SOPs	Comply SOPs for RDT in order to diagnosis MMR							A4	Role Play		

TOPIC: DENGUE

98	Week-12	Introduction	Define dengue	C1		Interactive Lecture	2	MCQs	5
99		Dengue serology	Enlist dengue serotypes	C1					
100		Clinical Features	Discuss the Clinical features of dengue infection	C1					
101		Transmission	Discuss dengue transmission	C2					

102		Pathogenesis	Explain pathophysiology of dengue virus infection	C2					
103		investigations	Advise investigations for the diagnosis of dengue	C3					
104		Complications	Discuss various complications associated with dengue infection	C4					
105		Management	Recommend treatment strategies for the management of dengue infection	C5					
106		Practical performance	Perfrom tourniquet test		P4	Demo	1	OSPE	
107		Comply to SOPs	Comply to SOPs for tourniquet test		A4	Role Play			

TOPIC: RABIES

108	Week-13	Introduction	Define Rabies infection	C1		Interactive Lecture	2	MCQs	4				
109		Causes	List causes of rabies	C1									
110		Sign and symptoms	Discuss the Clinical features of rabies	C1									
111		Pathophysiology	Explain pathophysiology of rabies	C2									
112		Investigations	Advise investigations for the diagnosis of rabies infection	C3									
113		Differential diagnosis	Construct knowledge for the differential diagnosis of rabies infection	C4									
114		Complications	Correlate various complications associated with rabies	C4									
115		Management	Ensure management for rabies	C5									
116		Practical performance	Demonstrate proper first aid for an animal bite by thoroughly washing the wound							P4	Demo	1	OSPE/OSCE
117		Ethical Norms	Communicate the procedure of washing wound to the patient effectively							A4	Role Play		

TOPIC: GONORRHEA & SYPHILIS

118	Week-14	Definitions	Define Gonorrhoea & Syphilis	C1		Interactive Lecture	2	MCQs	5				
119		Causes	Outline causes of Gonorrhoea & Syphilis	C1									
120		Sign and symptoms	Describe sign and symptoms of Gonorrhoea & Syphilis	C1									
121		Pathophysiology	Explain pathophysiology of Gonorrhoea & Syphilis	C2									
122		Investigations	Investigate patient for the diagnosis of Gonorrhoea & Syphilis	C3									
123		Differential diagnosis	Construct knowledge for the differential diagnosis of Gonorrhoea & Syphilis	C4									
124		Complications	List complication of Gonorrhoea & Syphilis	C1									
125		Management	Ensure management for Gonorrhoea & Syphilis	C4									
126		Practical performance	Perform the procedure of temperature recording independently							P4	Demo	1	OSPE/OSCE
127		Comply to SOPs	Comply with SOPs for the procedure of temperature recording effectively							A4	Role Play		

TOPIC: ROUNDWORM (ASCARIASIS)

128	Week-15	Introduction	Introduce Roundworm (Ascariasis)	C1		Interactive Lecture	2	MCQs/SEQs	4
129		Mode of transmission & life cycle	Draw life cycle of Roundworm	C1					
130		Clinical Features	Describe Clinical features of Roundworm (Ascariasis)	C1					
131		Pathophysiology	Explain pathophysiology of Roundworm (Ascariasis)	C2					

132		investigations	Investigate patient for the diagnosis of Roundworm (Ascariasis)	C3					
133		Differential diagnosis	Compare Ascariasis with other correlative infection	C4					
134		Complications	Correlate various complications associated with Roundworm (Ascariasis)	C4					
135		Treatment	Recommend treatment strategies for the management of Roundworm (Ascariasis)	C5					
136		Practical performance	Practically Perform proper handwashing technique to reduce the risk of fecal-oral transmission		P4	Demo	1	OSPE	
137		comply to SOPs	Adopt how to take care of hand washing		A4	Role Play			

TOPIC: SCABIES

138	Week-16	Introduction	Define Scabies	C1		Interactive Lecture	2	MCQs/SEQs	5
139		Causes	Discuss causes of Scabies	C1					
140		Clinical Features	Describe clinical features of scabies	C1					
141		Pathophysiology	Explain pathophysiology of scabies	C2					
142		investigations	Investigate patient for the diagnosis of scabies	C3					
143		Complications	Correlate various complications associated with scabies infection						
144		Treatment	Recommend treatment strategies for the management of Roundworm (Ascariasis)	C5					
145		Practical performance	Video Demonstration of Clinical images with marked lesions of scabies		P4	Demo	1	OSPE	
146		Comply to SOPs	Comply to SOPs for the Video demonstration		A4	Role Play			

Recommended Books

1. Kumar and Clark's Clinical Medicine 10th edition
2. Davidson's Principals and practice of medicine 22nd edition
3. Mohammad Inam Danish-Short Textbook Of Medica Diagnosis And Treatment
- 4 Rosen's emergency medicine; concepts & Clinical practice John.A Marx.2005

S.No	Topics	No of MCQS	OSPE/OSCE Station	Interactive or Statics
1.	Approach To The Patient With A Suspected Infection	3	Demonstrate history taking, General physical examination for Infectious disease	Static
2.	Sepsis	5	Demonstrate initial management such as fluid resuscitation and antibiotic administration	Static
3.	Fever And Pyrexia Of Unknown Origin	4	Practical demonstration of thermometer to measure body temperature	Interactive
4.	Whooping Cough	4	Demonstrate the correct use of personal protective equipment (PPE)	Interactive
5.	Diphtheria	4	Demonstrate the correct technique for collecting a throat swab for culture	Interactive
6.	Cholera	5	Demonstrate the preparance of oral Rehydration Solution (ORS)	Interactive
7.	Typhoid Fever	4	Practical perform cold sponging technique to reduce body temperature	Interactive
8.	Tetanus	4	Practical demonstration to Administer the tetanus vaccine	Static
9.	Amebic Dysentery	4	Demonstration of proper stool sample collection using a labeled container	Static

10.	Malaria	5	Demonstrate RDT for the diagnosis of malaria	Static
11.	Measles Mump Rubella(MMR)	5	Demonstrate RDT for the diagnosis of MMR	Static
12.	Dengue	5	Perfrom tourniquet test	Interactive
13.	Rabies	4	Demonstrate animal bite wound washing	Static
14.	Gonorrhea & Syphilis	5	Perfrom the procedure of temperature recording independently	Static
15.	Roundworm (Ascariasis)	4	Practically Perform proper handwashing technique	Static
16.	Scabies	5	Demonstration of Clinical images with marked lesions of scabies	Static
Total Topic=16		Total = 70	Total OSPE/OSCE Station= 20 1. (Interactive & Static) = 14 2. Rest station = 6	

BHS-608 Pre- & Post-Operative Care 3(2+1)

Course Description

This course provides comprehensive training on pre-operative and post-operative care, focusing on ensuring patient safety, enhancing recovery, and improving surgical outcomes. Students will learn pre-operative preparation, including counseling, infection prevention, and positioning techniques, as well as post-operative care practices, such as early complication management, nutrition, mobility, and surgical drain management. The course integrates theoretical knowledge, practical skills, and compassionate care principles to prepare students for holistic perioperative patient care.

Learning Objectives

Cognitive Domain

By the end of this course, students should be able to

1. Understand the principles and practices of pre-operative and post-operative care
2. Know infection prevention
3. Informed consent and management of post-surgical complications

Psychomotor Domain

By the end of this course, students should be able to

1. Perform essential skills used for good practice for informed consent
2. Administration of prophylactic antibiotics
3. Monitoring and removal of surgical drains with accuracy and dressing as well

Affective Domain

By the end of this course, students should be able to

- 1-Demonstrate punctuality
2. Follow the specified norms of the IL, SGD teaching & learning effectively
3. Demonstrate humbleness and use socially acceptable language during academic and social interactions with human models, colleagues, and teachers.
4. Demonstrate professionalism by addressing patient concerns, providing emotional support, and ensuring a patient-centered approach
5. Comply with SOPs of practical & procedure effectively

TABLE OF SPECIFICATIONS

TOS- PRE & POST-OPERATIVE CARE T 3(2+1)

S.No	Weeks	Contents	Learning Outcome	Domain			MIT's	Time/Hours	Assessment	No of Items
				C	P	A				
TOPIC: PRE-OPERATIVE COUNSELING AND INFORMED CONSENT										

1	Week-1	Definition	Define pre-operative care	C1		Interactive Lecture/SGD	2	MCQs	4
2		Importance of pre-operative care	Explain the importance of pre-operative care	C2					
3		Informed consent	Discuss informed consent	C1					
4		Pre-operative care counseling	Summarize pre-operative care counseling	C2					
5		Risks and benefits	Differentiate between effective and ineffective pre-operative counseling approaches	C4					
6		Practical performance	Practically Demonstrate on obtaining informed consent		P4	Demo	1	OSPE/OSCE	
7		Ethical norms	Maintain the ethical norms in pre-operative patients		A4	Role Play			

TOPIC: INFECTION PREVENTION

8	Week-2	Introduction	Introduction to Infection Prevention	C1		Interactive Lecture/SGD	2	MCQs	5
9		Importance	Explain the importance of antiseptic techniques in preventing surgical infections	C2					
10		Factors affecting	Describe the factors affecting infection prevention	C2					
11		Protocols	Allocate infection control protocols for infection prevention	C3					
12		Practical performance	Demonstrate proper PPE sops for the infection prevention		P4	Demo	1	OSPE/OSCE	
13		Sops compliance	Comply to sops for the demonstration on PPE		A4	Role Play			

TOPIC: PROPHYLAXIS

14	Week-3	Introduction	Define Prophylaxis	C1		Interactive Lecture/SGD	2	MCQs	5
15		Antibiotic prophylaxis	Explain the importance of antibiotic prophylaxis in pre-operative care	C2					
16		Prophylaxis (SSI)	Describe Prophylaxis for Surgical site infection	C2					
17		Administration of prophylaxis	Identify the appropriate timing and dosage of prophylactic antibiotics for a surgical patient	C3					
18		Practical performance	Demonstrate the correct method of antibiotic administration (oral, IV) on simulator		P4	Demo	1	OSPE/OSCE	
19		Sops compliance	Adopt how to take care of Simulator in skill lab		A4	Role Play			

TOPIC: INTRA-OPERATIVE CARE

17	Week-4	Definition	Define intra-operative care	C1		Interactive Lecture	2	MCQs	2
18		Importance intra-operative care	Discuss Importance of intra-operative care	C2					
19		Intra-operative care complications	Describe prevention of intra-operative care complications	C3					
20		Practical performance	Demonstrate the donning of sterile gloves		P4	Demo	1	OSPE/OSCE	
21		Sops compliance	Comply sops for donning of gloves in skill lab		A4	Role Play			

TOPIC: PROPER POSITIONING TECHNIQUES

22	Week-5	Definition	Define and name the common surgical positions	C1		Interactive Lecture/SGD	2	MCQs	3
23		Importance	Describe importance of Surgical positioning	C1					

24		Purposes	Explain the basic purpose of each surgical position	C2					
25		Benefits	Identify the benefits of correct surgical positioning	C1					
27		Practical performance	Video demonstration of different techniques for positioning of patient in common surgeries		P4	Demo	1	OSPE/OSCE	
28		Ethical norms	Maintain the ethical norms in intra-operative patients		A4	Role Play			
TOPIC: POST-OPERATIVE CARE									
29	Week-6	Definition	Define post-operative care	C1		Interactive Lecture/SGD	2	MCQs	5
30		Goals	Explain the primary goals of post-operative care	C2					
31		Complications	List common complications	C1					
32		Counselling	Explain the importance of educating patients about post-operative self-care and follow-up	C3					
33		Practical performance	Demonstrate How to take vital record of post-operative patient		P4	Demo	1	OSPE/OSCE	
34		SOPs compliance	Comply SOPs for vitals sign demonstration		A4	Role Play			
TOPIC: MANAGEMENT OF POST OPERATIVE PAIN									
34	Week-7	Definition	Define post-operative pain management	C1		Interactive Lecture/SGD	2	MCQs	5
35		Importance	Explain effective pain management is crucial for patient recovery	C2					
36		Types	Enlist types of pain	C1					
37		Pain Assessment Techniques	Identify common pain assessment tools	C3					
38		Methods of Pain Management	Describe pharmacological and non-pharmacological methods	C4					
39		Practical performance	Demonstrate the Numeric Rating Scale for pain management		P4	Demo	1	OSPE/OSCE	
40		Ethical norms	Maintain the ethical norms of patients during rating of pain		A4	Role Play			
TOPIC: POST OPERATIVE FEVER									
41	Week-8	Definition	Define post-operative fever	C1		Interactive Lecture	2	MCQs/SEQs	4
42		Causes	Explain the mechanisms leading to fever post-surgery	C2					
43		Classification	List the types of post-operative fever	C1					
44		Diagnostic Approach	Advise investigation for the diagnosis of post-operative fever	C3					
45		Management	Recommend treatment strategies for post-operative fever	C4					
46		Practical performance	Demonstrate the appropriate technique for cold sponging		P4	Demo	1	OSPE	
47		SOPs compliance	Comply SOPs		A4	Role Play			
TOPIC: POST OPERATIVE INFECTION									
46	Week-9	Introduction	Introducing post-operative infection	C1		Interactive Lecture/SGD	2	MCQs	6
47		Cause	Describe the cause of post-operative infection	C1					
48		Clinical features	Discuss the Clinical manifestations of post-operative infection	C2					
49		Investigations	Advise investigation for the diagnosis of post-operative fever	C3					

50		complications	Correlate potential complications of post-operative infection	C4					
51		Management	Recommend treatment strategies for post-operative infection	C4					
52		Practical performance	Demonstrate the donning of sterile gloves and surgical gowns		P4	Demo	1	OSPE/OSCE	
53		Ethical norms	Maintain the ethical norms of patients during cold sponging		A4	Role Play			
TOPIC: POST OPERATIVE VOMITING									
54	Week-10	Introduction	Introduce post-operative vomiting	C1		Interactive Lecture	2	MCQs	5
55		causes	Explain causes of post-operative vomiting	C2					
56		complications	Construct complications of post-operative vomiting	C3					
57		Management	Recommend treatment strategies for post-operative fever	C4					
58		Practical performance	Practical demonstration of appropriate techniques used for the post-operative vomiting		P4	Demo	1	OSPE/OSCE	
59		Counseling	Counsel the patient to keep not by mouth(NBM) after surgery		A4	Role Play			
TOPIC: POST OPERATIVE HYPOVOLEMIC SHOCK									
58	Week-11	Introduction	Introduce post-operative hypovolemic shock	C1		Interactive Lecture/SGD	2	MCQs	5
59		Cause	Describe the cause of post-operative hypovolemic shock	C1					
60		Clinical features	Discuss the Clinical manifestations of post-operative hypovolemic shock	C2					
61		Investigations	Advise investigation for the diagnosis of post-operative hypovolemic shock	C3					
62		complications	Correlate potential complications of post-operative infection	C4					
63		Practical performance	Perform a practical demonstration for IV cannulation		P4	Demo	1	OSPE/OSCE	
64		SOPs compliance	Comply SOPs for IV cannulation		A4	Role Play			
TOPIC: POST OPERATIVE HEMORRHAGE									
65	Week-12	Introduction	Define post-operative hemorrhage	C1		Interactive Lecture/SGD	2	MCQs/SEQs	5
66		Causes	Explain causes of post-operative hemorrhage	C2					
67		Complications	List complications of post-operative hemorrhage	C1					
68		Management	Recommend treatment strategies for post-operative hemorrhage	C2					
69		Practical Performance	Perform practical demonstration on simulator of Sterile dressing		P4	Demo	1	OSPE/OSCE	
70		Sops Compliance	Comply sops for simulator in skill lab		A4	Role Play			
TOPIC: POST OPERATIVE ANTIBIOTICS									
71	Week-13	Introduction	Introduce the role of antibiotics in preventing and treating infections after surgery	C1		Interactive Lecture/SGD	2	MCQs	4
72		Types	Identify common types of infections that may occur post-operatively, such as SSI	C2					
73		Administration	Explain the selection of appropriate antibiotics based on the surgical procedure	C2					
74		Complications	Correlate potential complications of Antibiotics	C3					

75		Practical performance	Practically Demonstrate test dose for Antibiotics		P4	Demo	1	OSPE/OSCE	
76		Ethical norms	Maintain the ethical norms of patients during test dose		A4	Role Play			
TOPIC: POST OPERATIVE MOBILITY									
77	Week-14	Introduction	Explain post-operative mobility	C1		Interactive Lecture/SGD	2	MCQs/SEQs	4
78		Importance o	Discuss importance of post-operative mobility	C2					
79		Factors affecting	List Factors affecting post-operative mobility	C3					
80		Complications Due to Immobility	Construct complications of immobilization	C4					
81		Practical performance	Demonstrate basic post-operative mobility exercises e.g., deep breathing, leg exercises		P4	Demo	1	OSPE	
82		SOPs compliance	Comply SOPs for vitals sign demonstration		A4	Role Play			
TOPIC: MANAGING SURGICAL DRAINS									
83	Week-15	Introduction	Define surgical drains and explain their role in post-operative care	C1		Interactive Lecture/SGD	2	MCQs	3
84		Types	List types of surgical drain	C1					
85		Indication	Explain when and why surgical drains are used	C3					
86		Insertion	Describe proper insertion site	C3					
87		Complication	Discuss potential complications of surgical drains	C3					
88		Monitring	Describe how to monitor and assess surgical drain	C2					
89		Practical performance	Demonstrate proper removal of surgical drain on Simulated mannequin		P4	Demo	1	OSPE/OSCE	
90		SOPs compliance	Comply SOPs for simulated mannequin		A4	Role Play			
TOPIC: POST OPERATIVE NUTRITION									
91	Week-16	Introduction	Introduce Nutrient use post-surgery	C1		Interactive Lecture/SGD	2	MCQs	5
92		Types of Diets Post-Surgery	List the types of diets commonly recommended post-Operative	C1					
93		Macronutrient needs after surgery	Identify and describe the role of macronutrients	C2					
94		Micronutrient requirements post-surgery	Discuss the role of vitamins and minerals in supporting the immune system and wound healing after surgery	C2					
95		Enteral and Parenteral Nutrition	Discuss the use of enteral (tube feeding) and parenteral nutrition in post-operative patients who are unable to eat normally	C3					
96		Patient Education on Post-Operative Nutrition	Educate patients on the importance of nutrition	C4					
97		Practical performance	Demonstrate nutrient with the help of color charts & models		P4	Demo	1	OSPE/OSCE	
98		Sops compliance	Adopt how to take care of charts and models		A4	Role Play			

Recommended Books

1. Comuswhalan. Assisting at surgical operations, practical guide.
2. Nancy Marie Phillips, 11th edition. Berry Kohn's Operating Room Technique.
3. Colleen J Rutherford, RN, CNOR Educator. Differentiating Surgical Equipment and supplies
4. Maxine A. Goldman, Room, 3rd Edition. Pocket guide to the Operating Room.

S.No	Topics	No of MCQS	OSPE/OSCE Station	Interactive or Statics
1.	Pre-Operative Counseling And Informed Consent	4	Practically Demonstrate on obtaining informed consent	Static
2.	Infection Prevention	5	Demonstrate proper PPE sops for the infection prevention	Static
3.	Prophylaxis	5	Demonstrate the correct method of antibiotic administration	Static
4.	Intra-Operative Care	2	Demonstrate the donning of sterile gloves	Interactive
5.	Proper Positioning Techniques	3	Video demonstration of different technique for positioning of patient in common surgeries	Static
6.	Post-Operative care	5	Demonstrate How to take vital record of post-operative patient	Interactive
7.	Management Of Post-Operative Pain	5	Demonstrate the Numeric Rating Scale for pain management	Static
8.	Post-Operative Fever	4	Demonstrate the appropriate technique for cold sponging	Static
9.	Post-Operative Infection	6	Demonstrate the donning of surgical gowns	Interactive
10.	Post-Operative Vomiting	5	Practical demonstration of appropriate techniques used for the post-operative vomiting	Static
11.	Post-Operative Hypovolemic Shock	5	Perform a practical demonstration for IV cannulation	Static
12.	Post-Operative Hemorrhage	5	Perform practical demonstration of Sterile dressing on simulator	Interactive
13.	Post-Operative Antibiotics	4	Practically Demonstrate test dose for Antibiotics	Static
14.	Post-Operative Mobility	4	Demonstrate basic post-operative mobility exercises e.g., deep breathing, leg exercises	Static
15.	Managing Surgical Drains	3	Demonstrate proper removal of surgical drain on Simulated mannequin	Static
16.	Post-Operative Nutrition	5	Demonstrate nutrient with the help of color charts & models	Static
Total Topic=16		Total = 70	Total OSPE/OSCE Station= 20 1. (Interactive & Static) = 14 2. Rest station = 6	

BHS-609 BASICS OF NEUROLOGY 3(2+1)

Course Description

This course has been designed to equip students with professional knowledge, skills, techniques, and ethical values to enable them to apply their acquired expertise in primary healthcare units and hospital wards. It focuses on assessing and managing common neurological disorders, understanding neuroanatomy and neurophysiology, taking a basic neurological history, and performing a basic neurological examination.

Learning Objectives

Cognitive Domain

By the end of this course, students should be able to

1. Obtained relevant information through effective history-taking and physical examination techniques.
2. Analyzing and synthesizing data to know patterns and make relationships between Symptoms and underlying conditions.
3. Identifying treatment plans that are needed for each patient.
4. Evaluating the effectiveness of interventions and adjusting treatment plans as needed

Psychomotor Domain

By the end of this course, students should be able to

1. Perform comprehensive neurological history-taking.
2. Interpret neurological examination findings.
3. Identify and evaluate common neurological disorders (e.g., stroke, headaches).
4. Communicate effectively with patients, families, and healthcare teams.

Affective Domain

By the end of this course, students should be able to

- 1-Demonstrate punctuality
2. Follow the specified norms of the IL, SGD teaching & learning effectively
3. Demonstrate humbleness and use 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
5. Comply with SOPs of practical & procedure effectively

TABLE OF SPECIFICATION

TOS-BASICS OF NEUROLOGY 3(2+1)

S.No	Weeks	Contents	Learning Outcome	Domain			MIT's	Time/Hours	Assessment	No of Items
				C	P	A				
TOPIC: BASIC STRUCTURE AND FUNCTION OF NERVOUS SYSTEM										
1	Week-1	Introduction	Describe the basic structure and components of the nervous system	C1			Interactive Lecture/SGD	2	MCQs	5
2		Structure	Explain the role of neurons, neuroglia, and their functions	C2						
3		Functions OF CNS	Differentiate between the central and peripheral nervous systems	C2						
4		Functions (PNS)	Differentiate between the central and peripheral nervous systems	C1						
6		Basic neurophysiology	Understand the process of nerve impulse conduction	C2						
7		Neurotransmission	Understand the process of synaptic transmission	C2						
8		Practical performance	Identify brain and spinal cord structures using models or specimens		P4	Demo	1	OSPE/OSCE		
9		Comply to SOPs	Comply SOPs for the use of various models		A4	Role Play				
TOPIC: NEUROLOGICAL EXAMINATION SUCH AS (MYTOMES, DERMATOMES, REFLEXES, AVPU SCALE)										
10	Week-2	Mytomes	Define mytomes and explain their Clinical significance	C1			Interactive Lecture/SGD	2	MCQs	6
11		Dermatomes	Identify dermatomes and their role in sensory assessment	C2						
13		Reflexes	Describe basic reflex testing and interpret findings	C2						
14		AVPU scale	Explain the AVPU scale and apply it for assessing patient consciousness.	C3						
15		Practical performance	Practical perform of different Dermatomes		P4	Demo	1	OSPE/OSCE		
16		Ethical norms	Maintain the ethical norms of patients in order to asses dermatomes		A4	Role Play				
TOPIC: HEADACHE AND ITS TYPES										
11	Week-3	Definition	Define headache	C2			Interactive Lecture/SGD	2	MCQs	5
12		Types	Classify the types of headaches based on Clinical and etiological factors	C1						
13		Clinical Feature	Identify the Clinical features of common headache types (migraine, tension-type, cluster)	C1						
14		Neurological assessment	Recognize red flag signs and symptoms requiring immediate medical intervention	C2						

15		Treatment	Discuss appropriate neurological assessment and management strategies for headache patients	C3					
16		Practical performance	Practical performance of AVPU scoring scale		P4	Demo	1	OSPE/OSCE	
16		comply to SOPs	Adopt how to take informed consent for assessment		A4	Role Play			

TOPIC: FACIAL PAIN AND TRIGEMINAL NEURALGIA (TN)

17	Week-4	Introduction to Facial Pain	Define and list types of facial pain	C1		Interactive Lecture/SGD	2	MCQs	5			
18		Causes	Discuss Common causes of facial pain	C1								
19		Causes TN	Describe the cause of Trigeminal Neuralgia	C1								
20		Pathophysiology	Explain the pathophysiology of Trigeminal Neuralgia	C2								
21		Clinical features	Discus the Clinical features of TN	C1								
22		Diagnosis	Diagnosis for TN (including history, physical exam, and imaging)	C3								
23		Management	Recommend treatment for TN (medical and surgical)	C4								
24		Complications	Describe the complications of TN	C3								
25		Practical performance	Practical demonstration of ECG operation through a portable vital cardiac monitor		P4					Demo	1	OSPE/OSCE
26		Comply to SOPs	Comply to SOPs for the use of cardiac monitor		A4					Role Play		

TOPIC: STROKE & TIA

27	Week-5	Definition	Define stroke and its types	C1		Interactive Lecture/SGD	2	MCQs	5			
28		causes	Describe the causes associated with ischemic stroke and TIA	C1								
29		pathophysiology	Explain pathophysiology	C2								
30		Clinical presentation	Describe the Clinical signs and symptoms of ischemic stroke and TIA.	C1								
31		Diagnostic approach	Understand the diagnostic process to investigate Ischemic stroke & TIA	C3								
32		Management	Recommended the treatment plan for management of ischemic stroke and TIA	C4								
33		Prevention and rehabilitation	Explain strategies for the prevention and rehabilitation of patients	C3								
34		Complications	List complication of Stroke and TIA	C1								
35		Practical performance	Demonstrate the FAST or NIHSS stroke scales for evaluating stroke cases		P4					Demo	1	OSPE/OSCE
36		Ethical norms	Maintain the ethical norms of patients in order to evaluating stroke		A4					Role Play		

TOPIC: EPIDURAL HEMATOMA & SUBDURAL HEMATOMA

37	Week-	Definition	Define epidural hematoma, and subdural hematoma	C1		Interactive	2	MCQs	4
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38	6	Causes	Identify the causes and risk factors associated with these conditions	C1		Lecture/SGD			
		Clinical presentation	Discuss Clinical features of epidural hematoma, and subdural hematoma	C1					
39		Pathophysiology	explain pathophysiology of epidural hematoma, and subdural hematoma	C2					
40		Diagnostic approaches	Understand diagnostic approaches, including the role of imaging studies in identifying these conditions	C2					
41		Complications	list complication of epidural and subdural hematoma	C1					
42		Management	Recommend the acute management and surgical options available for these conditions	C5					
43		Practical performance	Practical demonstration of CT scans in order to identify hemorrhagic stroke, epidural hematoma, and subdural hematoma		P4		Demo	1	OSPE/OSCE
44		Comply to SOPs	Comply to SOPs for the demonstration CT scan		A4		Role Play		

TOPIC: CNS & SPINAL INFECTIONS (MENINGITIS)

45	Week-7	Introduction	Define Meningitis	C1		Interactive Lecture/SGD	2	MCQs	3			
46		Types	list different types of meningitis on the basis of etiology	C1								
47		Causes	Discuss etiological factors that's cause Meningitis	C1								
48		Clinical features	Describe Clinical features of meningitis	C1								
49		Pathophysiology	Explain pathophysiology of meningitis	C2								
50		Investigations	Advise investigation for the diagnosis of Meningitis	C3								
51		Complications	List complication of meningitis	C1								
52		Treatment	Recommend treatment plan for Meningitis	C4								
53		Practical performance	Practical demonstration of appropriate technique used for Lumber puncture on simulated mannequin		P4					Demo	1	OSPE/OSCE
54		SOPs compliance	Comply SOPs for demonstration of simulator		A4					Role Play		

TOPIC: CNS & SPINAL INFECTIONS (ENCEPHALITIS)

55	Week-8	Introduction	Define encephalitis	C1		Interactive Lecture/SGD	2	MCQs	3		
56		Causes	Discuss etiological factors that's cause encephalitis	C1							
57		Clinical features	Describe Clinical features of encephalitis	C1							
58		Pathophysiology	Explain pathophysiology of encephalitis	C2							
59		Investigations	Advise investigation for the diagnosis of encephalitis	C3							
60		Complications	list complication of Encephalitis	C1							
61		Treatment	Recommend treatment plan for encephalitis	C4							
62		Practical performance	Practical demonstration of motor reflexes of planter		P4					Demo	1

63		Ethical norms	Maintain the ethical norms of patients in order to asses reflexes		A4	Role Play			
TOPIC: TETANUS AND BOTULISM									
64	Week-9	Definition	Define tetanus and botulism	C1		Interactive Lecture/SGD	2	MCQs	4
65		Etiology	Discuss the causes tetanus and botulism	C1					
66		Pathophysiology	Explain the pathophysiology of tetanus and botulism	C2					
67		Transmission	Identify the modes of transmission, risk factors, and susceptible populations for these conditions	C2					
68		Clinical features	Identify the Clinical presentations of tetanus and botulism	C1					
69		Diagnosis	Advise investigations for the diagnosis of tetanus and botulism	C3					
70		Management	Recommend the treatment strategies for tetanus and botulism, including the use of antitoxins	C4					
71		Prevention	Discuss prevention strategies, including vaccination and hygiene measures	C3					
72		Practical performance	Demonstrate the administration of a tetanus toxoid injection using proper technique		P4				
73	Comply to SOP	Adhere to SOPs for aseptic techniques during injection		A4	Role Play				
TOPIC: BRAIN DEATH ASSESSMENT AND GLASGOW COMA SCALE (GCS) ASSESSMENT									
74	Week-10	Definition	Define brain death	C1		Interactive Lecture	2	MCQs/SEQs	5
75		Clinical features	Discuss sign Clinical manifestation of brain death	C1					
76		Criteria	understand the criteria and process for its assessment.	C2					
77		Pathophysiology	Explain the pathophysiology and Clinical features of brain death.	C2					
78		Diagnose	Advise the investigation and Understand the ethical and legal implications of declaring brain death.	C3					
79		Definition GCS.	Define the GCS	C1					
80		Components	Explain the components of GCS	C1					
81		Clinical applications	Describe the Clinical applications and limitations of the Glasgow Coma Scale.	C3					
82		Practical performance	Practical demonstration of GCS on patient		P4				
83	Ethical norms	Maintain the ethical norms of patients in order to count GCS score		A4	Role Play				
TOPIC: GUILLAIN-BARRÉ SYNDROME (GBS)									
84	Week-11	Definition	Define Guillain-Barre Syndrome	C1		Interactive Lecture/SGD	2	MCQs/SEQs	4
85		Types	Enlist types of Guillain-Barre Syndrome	C1					
86		Pathophysiology	Explain the pathophysiology of GBS.	C2					
87		Causes & risk	Discuss the causes and risk factors of GBS.	C1					

88		Clinical features	Describe the Clinical presentation of GBS	C1					
89		Diagnostic approach	Understand the diagnostic approaches, including nerve conduction studies and CSF analysis	C3					
90		Management	Recommend the treatment options for GBS	C4					
91		complications	Explain the potential complications and rehabilitation strategies for GBS patients.	C4					
92		Practical performance	Practical performance of different Myotomes		P4	Demo	1	OSPE/OSCE	
93		Ethical norms	Maintain the ethical norms of patients in order to asses' myotomes		A4	Role Play			

TOPIC: SCIATIC PAIN

94	Week-12	Definition	Define sciatic pain	C1		Interactive Lecture	2	MCQs/SEQs	4
95		Anatomy of Sciatic Nerve	Describe the anatomy of sciatic nerve	C1					
96		Etiology	Discuss the causes of sciatic pain	C1					
97		Pathophysiology	Explain the pathophysiology of sciatic pain	C2					
98		Factors	Discuss the risk factors and aggravating factors for Sciatic Pain	C2					
99		Clinical features	Identify the Clinical presentations of sciatic pain	C1					
100		Diagnosis	Advise investigations for the diagnosis of sciatic pain	C3					
101		Management	Recommend the treatment strategies for treatment of sciatic pain	C4					
102		Rehabilitations	Explain rehabilitation strategies and preventive measures for managing and reducing sciatic pain	C4					
103		Practical performance	Demonstration of Physical Examination Techniques such as the Straight Leg Raise (SLR) test and Braggart's test to assess sciatic nerve involvement		P4				
104	SOPs compliance	Adhere to SOPs for physical examination, and patient education on home care exercises		A4	Role Play				

**TOPIC: SPINAL CORD
COMPRESSION, SPINAL CORD SYNDROMES**

105	Week-13-14	Definition and types	Define and classify spinal cord compression	C1		Interactive Lecture/SGD	2	MCQs/SEQs	6
106		Pathophysiology and causes	Explain the pathophysiological mechanisms and causes of spinal cord compression.	C2					
107		Clinical feature	Describe the Clinical manifestations of spinal cord compression including Spinal cord Syndromes	C1					
108		Diagnosis	Discuss the diagnostic approaches, including imaging and neurological assessment	C3					
109		Management	Outline the management options, including medical, surgical, and supportive care.	C4					
110		Rehabilitation	Explain the rehabilitation strategies for patients with spinal cord compression.	C2					
111		Practical	video demonstration of proper spine immobilization with collars		P4				

		performance							
112		Comply to SOPs	Follow SOPs for uses of braces, collars			A4	Role Play		

TOPIC: SEIZURES AND EPILEPSY

113	Week-15	Definition and Types of Seizures	Define seizures and epilepsy and also explain the different types of seizures	C1		Interactive Lecture Demo	2 1	MCQs/SEQs OSPE	6
114		Pathophysiology and Etiology	Discuss the underlying mechanisms of seizures, and explore the various causes of seizures.	C2					
115		Clinical presentation	Describe the symptoms of seizures, such as motor, sensory, and behavioral signs, and how to recognize and document a seizure.	C1					
116		Diagnostic studies	Discuss the diagnostic process, including medical history, physical examination, EEG, and neuroimaging.	C3					
117		Treatment	Discuss the various treatment options for epilepsy, including medications, surgery, and lifestyle modifications.	C4					
118		Prognosis and Complications of Epilepsy	Discuss the long-term outlook for people with epilepsy and also explain potential complications associated with epilepsy.	C4					
119		Practical performance	Video demonstration to Differentiate pseudo seizure from epilepsy		P4	Video Demo	1	OSPE/OSCE	
120		Comply to SOPs	Comply sops for Video demonstration		A4	Role Play			

TOPIC: CEREBRAL EDEMA

121	Week-16	Definition and classification	Definition and discuss the classification of cerebral edema	C1		Interactive Lecture	2	MCQs/SEQs	5
122		Pathophysiology, Etiology	Explain the Pathophysiology, common causes, and Risk Factors of cerebral edema.	C2					
123		Clinical Features	Explain the signs and symptoms	C1					
124		Diagnostic Approaches	Explain the Diagnostic Approaches including Clinical assessment, Imaging and Monitoring tools	C3					
127		Management of Cerebral Edema	Discuss the Medical interventions, Surgical interventions, and Supportive care for cerebral edema	C4					
128		Complications	Understand complications like brain herniation, secondary ischemic damage, and long-term neurological deficits	C4					
129		Practical performance	Video demonstration of cerebral edema on X-ray		P4	Video Demo	1	OSPE/OSCE	
130		Comply to SOPs	Comply sops for Video demonstrartion		A4	Role Play			

Recommended Books

1. ABC's of Emergency Medicine
2. Kumar and Clark's Clinical Medicine 10th edition
2. Davidson's Principals and practice of medicine 22nd edition

S.No	Topics	No of MCQS	OSPE/OSCE Station	Interactive or Statics
1.	Basic Structure And Function Of Nervous System	5	Demonstrate brain and spinal cord structures using models or specimens	Static
2.	Neurological Examination Such As (Myotomes, Dermatomes, Reflexes, Avpu Scale)	6	Practical performance of different Dermatomes	Interactive
3.	Headache And Its Types	5	Practical performance of AVPU scoring scale	Static
4.	Facial Pain And Trigeminal Neuralgia (TN)	5	Practical demonstration of ECG leads attachment on simulator	Interactive
5.	Stroke & Tia	5	Demonstrate the FAST or NIHSS stroke scales for evaluating stroke cases	Static
6.	Epidural Hematoma & Subdural Hematoma	4	Practical demonstration of CT scans to identify hemorrhagic stroke, epidural hematoma, and subdural hematoma	Static
7.	CNS & Spinal Infections (Meningitis)	3	Practical demonstration of appropriate technique used for Lumber puncture on simulated mannequin	Static
8.	CNS & Spinal Infections (Encephalitis)	3	Practical demonstration of motor reflexes of planter	Interactive
9.	Tetanus And Botulism	4	Demonstrate the administration of a tetanus toxoid injection using proper technique	Static
10.	Brain Death Assessment And Glasgow Coma Scale (GCS) Assessment	5	Practical demonstration of GCS on patient	Static
11.	Guillain-Barre Syndrome (GBS)	4	Practical perform of different Myotomes	Interactive
12.	Sciatic Pain	4	Demonstrate Straight Leg Raise (SLR) test and Braggart's test to assess sciatic nerve involvement	Interactive
13.	Spinal Cord Compression, Spinal Cord Syndromes	6	Demonstrate proper spine immobilization with collars	Static
14.	Seizures And Epilepsy	6	Video demonstration to Differentiate pseudo seizure from epilepsy	Static
15.	Cerebral Edema	5	Video demonstration of cerebral edema on X-ray	Static
Total Topic=15		Total = 70	Total OSPE/OSCE Station= 20 1. (Interactive & Static) = 14 2. Rest station = 6	

BHS-610 Nutritional and Endocrine disorders 3(2+1)

Course Description

This course equips students with the professional knowledge, skills, and ethical values required to assess and manage common nutritional and endocrine disorders in primary healthcare and hospital settings. It focuses on understanding the interplay between nutrition and endocrine function, performing basic Clinical assessments, and applying diagnostic and therapeutic techniques. Students will develop the ability to take comprehensive patient histories, conduct examinations, and implement evidence-based management plans while promoting health education and preventive care with empathy and professionalism.

Learning Objectives

Cognitive Domain

By the end of this course students should be able to

1. Obtained relevant information through effective history-taking and physical examination techniques.
2. Analyzing and synthesizing data to know patterns and make relationships between Symptoms and underlying conditions.
3. Identifying treatment plans that are needed for each patient.
4. Evaluating the effectiveness of interventions and adjusting treatment plans as needed

Psychomotor Domain

By the end of this course students should be able to

1. Perform comprehensive Nutritional & Endocrine Disorder history-taking.
2. Interpret Nutritional & Endocrine examination findings.
3. Identify and evaluate common nutritional & Endocrine disorders.
4. Communicate effectively with patients, families, and healthcare teams.

Affective Domain

By the end of this course students should be able to

1. Demonstrate punctuality
2. Follow the specified norms of the IL, SGD teaching & learning effectively
3. Demonstrate humbleness and use 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

TABLE OF SPECIFICATION

TOS-NUTRITIONAL & ENDOCRINE DISORDER 3(2+1)

S.No	Weeks	Contents	Learning Outcome	Domain			MIT's	Time/Hours	Assessment	No of Items
				C	P	A				
TOPIC: FUNCTIONAL ANATOMY AND PHYSIOLOGY										
1	Week-1	Digestion and absorption processes	Explain the processes of digestion and nutrient absorption in the GI tract.	C1			Interactive Lecture/SGD	2	MCQs	5
2		Nutrients	Differentiate between macronutrients and micronutrients in terms of roles and metabolism.	C1						
3		Overview of Endocrine system	Define the endocrine system and hormones also discuss the classification of hormones	C2						
4		Functions	Discuss the functions of major endocrine glands and their associated hormones.	C3						
5		Practical performance	Identify anatomical structures of the digestive and endocrine systems using video and chart demonstrations.		P4	Demo	1	OSPE/OSCE		
6		Comply to sops	Comply to sops for the use of various models		A4	Role Play				
TOPIC: DIETARY REQUIREMENTS AND PROTEIN-ENERGY MALNUTRITION										
7	Week-2	Overview of dietary requirements	Introduce the importance of dietary requirements	C1			Interactive Lecture/SGD	2	MCQs	4
8		Affecting factors	Identify factors influencing nutritional needs such as age, gender, activity level, etc.	C1						
9		Recommended dietary allowances (RDA)	Understand the concept of recommended dietary allowances (RDA).	C2						
10		Protein-energy malnutrition (PEM)	Define Protein-energy malnutrition (PEM)	C1						
11		Types and cause	Discuss their types and causes.	C1						
12		Clinical manifestations of PEM	Describe the different types such as Kwashiorkor, and Marasmus of PEM, and recognize the Clinical features of these types.	C1						
13		Diagnoses	Advise investigation for the diagnoses of PEM	C3						
14		Management	Recommend strategies for managing PEM.	C4						
15		Practical performance	Calculate daily energy and protein requirements and identify Clinical features of PEM using charts.		P4	Demo	1	OSPE/OSCE		
16		Comply to sops	Follow sops for calculating energy, protein needs, and identifying PEM features using charts		A4	Role Play				

TOPIC: VITAMINS DEFICIENCY DISEASE									
17	Week-3-4	Definition	Define and explain the classification of vitamin deficiency disease.	C1		Interactive Lecture/SGD	2	MCQs	7
18		Types of vitamin deficiencies	Enlist different types of vitamin deficiency	C1					
19		Causes and risk factors	Discuss the different causes and risk factors of vitamin deficiency disease.	C1					
20		Pathophysiology	Explain the pathophysiology of vitamin deficiency disease.	C2					
21		Clinical features	Explain the Clinical manifestation of vitamin deficiency disease	C1					
22		Diagnosis	Discuss the diagnostic approaches including Clinical history, physical examination, and relevant investigations	C3					
23		Treatment	Recommend the treatment and prevention strategies	C3					
24		Practical performance	Video demonstration of Clinical abnormalities in various vitamin deficiency diseases.						
25		Comply to sops	Follow standard protocols for the given practical		A4	Role Play			
TOPIC: MINERALS DEFICIENCY DISEASES									
26	Week-5	Introduction	Define, and classify the different minerals, also discuss the dietary sources of essential minerals	C1		Interactive Lecture/SGD	2	MCQs	4
27		Specific mineral deficiencies	Enlist different mineral deficiency diseases	C2					
28		Pathophysiology	Explain the pathophysiology of common mineral deficiency diseases	C2					
29		Clinical features	Explain the Clinical features of common mineral deficiency diseases	C3					
30		Diagnosis	Discuss the diagnosis for mineral deficiency diseases (including history, physical exam, and investigation).	C3					
31		Management	Describe treatment for mineral deficiency diseases	C4					
32		Complications	Describe the complications of mineral deficiency diseases	C2					
33		Practical performance	Demonstrate history taking, General physical examination for Minerals Deficiency Diseases						
34		Comply to sops	Comply to sops for use of OSCE in patient assessment, history taking, physical examination		A4	Role Play			
TOPIC: INTRODUCTION & AND CLINICAL EXAMINATION OF ENDOCRINOLOGY									
35	Week-6	Introduction to Endocrinology	Discuss hormonal regulation and feedback mechanisms.	C1		Interactive Lecture/SGD	2	MCQs	6
36		History taking	Understand the key elements of history taking relevant to endocrine disorders.	C2					
37		Clinical Examination in Endocrinology	Explain the sept and techniques of physical examination for endocrine diseases.	C3					
38		Practical performance	Demonstrate history taking, General physical examination for		P4	Demo	1	OSPE/OSCE	

			endocrine disorder						
39		Comply to SOPs	comply to SOPs for use of OSCE in patient assessment, history taking, physical examination		A4	Role Play			
TOPIC: DIABETES MELLITUS AND DIABETIC KETOACIDOSIS									
40	Week-7	Introduction	Define diabetes mellitus and classify its different types.	C1		Interactive Lecture/SGD	2	MCQs	6
41		Causes and risk factors	Discuss the different causes and risk factors DM.	C2					
42		Pathophysiology	Explain the pathophysiology DM and DKA.	C2					
43		Clinical features	Identify the Clinical features of Type 1 and Type 2 DM						
44		Diagnosis	Advise investigation for the diagnosis of DM and DKA	C3					
45		Treatment	Recommend the management, including diet, exercise, medication adherence, and self-monitoring of blood glucose	C4					
46		Complication	List the long-term complications of DM	C3					
47		Practical performance	Practical Perform blood glucose assesment test using glucometer		P4	Demo	1	OSPE/OSCE	
48		Comply to SOPs	Comply with SOPs for using the glucometer		A4	Role Play			
TOPIC: DIABETES INSIPIDUS									
49	Week-8	Introduction	Define Diabetes Insipidus	C1		Interactive Lecture/SGD	2	MCQs	4
50		Causes	Discuss the different causes of diabetes Insipidus.	C1					
51		Clinical features	Describe the Clinical manifestation of diabetes Insipidus.	C1					
52		Pathophysiology	Explain the Pathophysiology of diabetes Insipidus	C2					
53		Diagnosis	Advise the different methods for the diagnosis	C3					
54		Management	construct the different treatment protocols for diabetes insipidus	C4					
55		Practical performance	Determination of Urinalysis through urine strips						
56		Ethical norms	Maintain the ethical norms of patients in order to collect urine sample		A4	Role Play			
TOPIC: THYROTOXICOSIS, HYPERTHYROIDISM & HYPOTHYROIDISM									
57	Week-9	Introduction	Define and explain the types Hyperthyroidism & Hypothyroidism	C1		Interactive Lecture/SGD	2	MCQs	6
58		Clinical features	Explain the Clinical feature Hyperthyroidism & Hypothyroidism and thyrotoxicosis	C1					
59		Causes	Describe cause of Hyperthyroidism & Hypothyroidism	C1					
60		Pathophysiology	Explain pathophysiology of thyrotoxicosis, hyperthyroidism, and hypothyroidism.	C2					
61		diagnosis	Advise investigation for the diagnosis of Hyperthyroidism & Hypothyroidism	C3					

62		Complication	Identify complications associated with thyroid disorders (e.g., thyroid storm, myxedema coma).	C4					
63		Management	Describe management options include pharmacologic treatments, with patient education on adherence, lifestyle changes, and regular monitoring.	C4					
		Practical performance	Practical perform physical examination for Hypo & Hyperthyroidism		P4	Demo	1	OSPE/OSCE	
		Ethical norms	Maintain the ethical norms of patients in order to examine patient		A4	Roll Play			

TOPIC: CUSHING'S SYNDROME

64	Week-10	Introduction	Define and explain the different types of Cushing's syndrome	C1		Interactive Lecture/SGD	2	MCQs/SEQs	4
65		Pathophysiology and Causes	Detail the causes and pathophysiological mechanisms of different causes of Cushing's Syndrome.	C2					
66		Clinical Manifestations:	Describe the characteristic signs and symptoms of Cushing's Syndrome in details.	C1					
67		Diagnosis	Explain the diagnosis in details.	C3					
68		Management	Describe the different treatment approaches for Cushing's Syndrome.	C4					
69		Practical performance	Physical examination specifically for Cushing Syndrome		P4	Demo	1	OSPE	
70		Ethical norms	Maintain the ethical norms of patients in order to examine patient		A4	Role Play			

TOPIC: ADRENAL INSUFFICIENCY (ADDISON'S DISEASE)

71	Week-11	Introduction	Define and explain the different types of Addison's disease	C1		Interactive Lecture/SGD	2	MCQs/SEQs	4
72		Pathophysiology and Causes	Detail the causes and pathophysiological mechanisms of different causes	C2					
73		Clinical Manifestations	Describe the characteristic signs and symptoms of Addison's disease in details.	C1					
74		Diagnosis	Advise investigation for the diagnosis in details	C3					
75		Management	Recognize the different treatment approaches for Addison's disease	C4					
76		Practical Performance	Practically perform Blood pressure measurement with help of Sphygmomanometer		P4	Demo	1	OSPE/OSCE	
77		Comply to SOPs	Comply SOPs for demonstration of BP measurement		A4	Role Play			

TOPIC: PITUITARY GLAND DISEASES

78	Week-12-13	Introduction	Define and classify the different types of common Pituitary Gland Diseases	C1		Interactive Lecture/SGD	2	MCQs	8
79		Causes and risk factors	Discuss the different causes and risk factors common Pituitary Gland Diseases	C2					

80		Pathophysiology and Clinical features	Explain the pathophysiology and Clinical features.	C2					
81		Diagnosis	Describe the diagnostics such as Clinical history, physical examination, and relevant investigations of common Pituitary Gland Diseases.	C3					
82		Treatment	Explain the management, including medical and surgical treatment.	C4					
83		Practical performance	Practical performance of IM injection		P4	Demo	1	OSPE/OSCE	
84		Sops compliance	Comply with sops with IM injection		A4	Role Play			

TOPIC: OBESITY AND UNDER-NUTRITION/MALNOURISHMENT

85	Week-14	Introduction	Define and discuss the types of obesity and Malnutrition	C1		Interactive Lecture/SGD	2	MCQs	5			
86		Causes & risk factors	Discuss the Causes and risk factors ,Epidemiology and Global Trends, Socioeconomic and Cultural Factors	C1								
87		Pathophysiology and Clinical features	Explain the Clinical manifestations of obesity and malnutrition	C2								
88		Assessment and Diagnosis	Describe the Anthropometric measurements such as BMI, waist-to-hip ratio, skinfold thickness and Biochemical investigations	C3								
89		Management and Prevention	Recommend management includes a healthy diet, exercise, psychological support, medications, or surgery and preventive measures	C4								
90		Health Impacts and Complications	Discuss the health impacts and complication of obesity and malnutrition.	C4								
91		Practical performance	Demonstrate the calculation of BMI and the steps for measuring mid-arm circumference		P4					Demo	1	OSPE/OSCE
92		Counseling	Adopt how to take care of balanced diet to prevent obesity		A4					Role Play		

TOPIC: PRESENTING PROBLEMS IN REPRODUCTIVE DISEASE AND MALE INFERTILITY

93	Week-15	Introduction to Reproductive Diseases	Introduce the reproductive system anatomy and physiology, common reproductive health issues across genders	C1		Interactive Lecture	2	MCQs/SEQs	4
94		Clinical Presentations in Female Reproductive Diseases	Explain the common Clinical presentation such as Menstrual Irregularities Pelvic Pain Abnormal Vaginal Discharge and Infertility etc.	C2					
95		Clinical Presentations in Male Reproductive Diseases	Discuss the common Clinical presentation including Urinary Symptoms, Scrotal Pain, Swelling and Erectile Dysfunction.	C3					
96		Introduction to Male Infertility	Define and briefly classify Male Infertility	C1					
97		Causes of Male Infertility	Explain the different causes of male infertility	C2					
98		Diagnosis and treatment	Describe the diagnostic procedure and treatment strategies.	C3					
99		Practical performance	Conduct a demonstration of history-taking for reproductive system diseases		P4				

100		Ethical norms	Maintain the ethical norms of patients in order to keep safe privacy of sensitive information		A4	Role Play			
TOPIC: AMENORRHEA									
101	Week-16	Introduction to Amenorrhea	Define and Classify Amenorrhea	C1		Interactive Lecture	2	MCQs	3
102		Causes	Discuss the causes of Amenorrhea	C2					
103		Clinical Features	Explain the Clinical manifestation associated with Amenorrhea	C3					
104		Diagnosis	Enlist the different diagnostic steps	C3					
105		Management of Amenorrhea	Discuss the management such as treatment of underlying cause, using hormonal therapy, surgical interventions, lifestyle and nutritional modifications.	C4					
106		Practical performance	Chart demonstration of Tanner staging for secondary sexual development in females		P4	Demo	1	OSPE/OSCE	
107		Comply to SOPs	Comply with SOPs by accurately demonstrating the chart for Tanner staging .		A4	Role Play			

Recommended Books:

1. Kumar and Clark's Clinical Medicine 10th edition
2. Davidson's Principles and practice of medicine 22nd edition
3. Mohammad Inam Danish-Short Textbook Of Medica Diagnosis And Treatment

S.No	Topics	No of MCQS	OSPE/OSCE Station	Interactive or Statics
1.	Functional Anatomy And Physiology	5	Identify anatomical structures of the digestive and endocrine systems using video and chart demonstrations.	Static
2.	Dietary Requirements And Protein-Energy Malnutrition	4	Calculate daily energy and protein requirements and identify Clinical features of PEM using charts	Static
3.	Vitamins Deficiency Disease	7	Video demonstration of Clinical abnormalities in various vitamin deficiency diseases	Static
4.	Minerals Deficiency Diseases	4	Demonstrate history taking, General physical examination for Minerals Deficiency Diseases	Interactive
5.	Introduction & And Clinical Examination Of Endocrinology	6	Demonstrate history taking, General physical examination for endocrine disorder	Interactive
6.	Diabetes Mellitus And Diabetic Ketoacidosis	6	Practical Perform blood glucose assesment test using glucometer	Static
7.	Diabetes Insipidus	4	Determination of Urinalysis through urine strips	Static
8.	Thyrotoxicosis, Hyperthyroidism & Hypothyroidism	6	Practical perform physical examination for Hypo & Hyperthyroidism	Static
9.	Cushing's Syndrome	4	Physical examination specifically for Cushing Syndrome	Interactive
10.	Adrenal Insufficiency (Addison's Disease)	4	Practically perform Blood pressure measurement with help of Sphygmomanometer	Interactive

11.	Pituitary Gland Diseases	8	Practical performance of IM injection	Static
12.	Obesity And Under-Nutrition/Malnutrition	5	Demonstrate the calculation of BMI and the steps for measuring mid-arm circumference	Static
13.	Presenting Problems In Reproductive Disease And Male Infertility	4	Conduct a demonstration of history-taking for reproductive system diseases	Static
14.	Amenorrhea	3	Chart demonstration of Tanner staging for secondary sexual development in females	Static
Total Topic=14		Total = 70	Total OSPE/OSCE Station= 20 1. (Interactive & Static) = 14 2. Rest station = 6	

THE END