KHYBER MEDICAL UNIVERSITY

HEALTH TECHNOLOGY CURRICULUM

STUDY GUIDE SEMESTER 5

16 Weeks Activity Planner

2024-25

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

Contents

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 healthcare.

5th Semester Subjects for BS Health Technology

S. No	Subjects	Course code	Credit Hrs.	Duration
1	Cardio - Pulmonary Disease	BHS-602	3 (2+1)	16 weeks
2	Gastrointestinal and Hepatobiliary Disease	BHS-603	3 (2+1)	16 weeks
3	First Aid	BHS-604	3 (2+1)	16 weeks
4	Critical care	ANS-609	3 (2+1)	16 weeks
5	Leadership and Management	ANS-610	2 (2+0)	16 weeks
6	Burns & Toxicology	ECT-605	3 (2+1)	16 weeks

BHS-602 Cardio - Pulmonary 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 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 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 individual 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. To identify various structures through models and charts
2. To perfom Operating Cardiac Monitring
3. To perform Clinical Examination
4. To perform Phlebotomy, Iv Canula

Affective Domain

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

1. comply to SOP for various models and charts
2. comply to SOPs for Operating Cardiac Monitring
3. comply to SOPs for Clinical Examination
4. comply to SOPs for Phlebotomy, Iv Canula and Capnography.

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TABLE OF SPECIFICATIONS

TOS- CARDIO- PULMONARY DISEASE 3(2+1)

S.No	Weeks	Contents	Learning Outcome	Domain C	Domain P	Domain A	MIT's	Time/Hours	Assessment	No of Items
TOPIC: COMPLETE HISTORY TAKING										
1	Week-1	Definition	Define history taking	C1			Interactive Lecture/SGD	2	MCQs	5
2		Importance	Identify the importance of history-taking.	C2						
3		General approach	Approach for history-taking with a better outcome	C2						
4		Component	Enlist different components of history taking	C1						
5		Data and Sources of the history	Explain the data and different sources of history	C2						
6		History taking in respiratory diseases	Discuse history-taking in respiratory diseases	C2						
7		History taking in gastrointestinal diseases	Discuse hisory-taking in gastrointestinal diseases	C2						
8		History taking in nerve system diseases	Discuse hisory-taking in nervous system diseases	C2						
9		History taking in genitourinary system diseases	Discuse hisory taking in genitourinary system diseases	C2						
10		History taking in obstetrical conditions	Discuse hisory taking in obstetrical conditions	C2						
11		Practical performance	Step by step process of collecting information by asking questions		P4		Demo	1	OSPE/OSCE	
12		Counseling	Counseling of patient for History taking			A4	Role Play			
TOPIC: GENERAL PHYSICAL EXAMINATION										
13	Week-2	Definition	Define general physical examination	C1			Interactive Lecture/SGD	2	MCQs	5
14		Principles	Discuss the general principles of physical examination	C1						
15		Components	Describe the components of a physical examination	C2						
16		Preparation	Enlist steps for preparing for the physical examination	C2						
17		Comprehensive approach systemic-wise	Recognize general physical examination of the respiratory, gastric, cardiovascular, nervous, and geniturinary systems	C2						
18		Practical performance	Practical demonstration on general physical examination		P4		Demo	1	OSPE/OSCE	
19		Counseling	Communicate the process before going to examine physically			A4	Role Play			
TOPIC: SYSTEMIC HYPERTENSION										
20	Week-3	Definition	Define Hypertension	C1			Interactive Lecture/SGD	2	MCQs	5
21		Types	Enlist different types of Hypertension	C1						

22		Etiology	Enlist causes of Hypertension	C2						
23		Pathogenesis	Discuss Pathogenesis of Hypertension	C3						
24		Clinical feature	Explain Clinical feature of Hypertension	C2						
25		Management	Build a treatment plan for Hypertension	C4						
26		Practical performance	Practical Demonstration of Sphygmomanometer for BP Recording		P4		Demo	1	OSPE/OCE	
27		Comply to SOPs	Comply to SOPs for the use of Sphygmomanometer		A4		Role Play			
TOPIC: CORONARY ARTERY DISEASE ,ANGINA PECTORIS AND MI										
28	Week-4-5	Definition	Define Coronary artery disease (CAD)	C1			Interactive Lecture/SGD	2	MCQs/SEQs	8
29		Pathophysiology	Describe Pathophysiology of CAD	C2						
30		Risk factors	Explain risk factors of CAD	C1						
31		Definition	Define Angina Pectoris	C1						
32		Types	Enlist different types of Angina Pectoris	C1						
33		Clinical feature	Describe the clinical features of Angina Pectoris	C2						
34		Diagnosis	Advise various investigations for the diagnosis of Angina pectoris	C3						
35		Management	Build a treatment plan for the management of Angina pectoris	C4						
36		Definition	Define Myocardial infarction	C1						
37		Pathophysiology	Discuse Pathophysiology of MI	C2						
38		Risk factors	Explain risk factors for MI	C2						
39		Diagnosis	Advise an investigation for the evaluation of MI	C3						
40		Management	Build a treatment plan for MI	C4						
41		Complications	Enlist complication of MI	C2						
42		Practical performance	Practical demonstration for Obtaining an ECG paper Using an ECG Machine		P4		Vedio	1	OSPE/OSCE	
43		Comply to SOPs	Adopt how to take care of cardiac monitor			A4	Role Play			
TOPIC: HEART FAILURE										
44	Week-6	Introduction	Understand various terms related to heart failure	C1			Interactive Lecture/SGD	2	MCQs/SEQs	5
45		Clinical feature	Describe the clinical features of heart failure	C1						
46		Causes	Enlisted causes of heart failure	C1						
47		Pathophysiology	Explain the pathophysiology of heart failure	C2						
48		Classification	Classify heart failure into various types	C1						
49		Diagnosis	Advise various investigations for the diagnosis of heart failure	C3						
50		Management	Build a treatment plan for heart failure	C4						
51		Complications	Enlist various complications associated with heart failure.	C4						
52		Practical performance	Practical demonstration of cardiomegaly using chest X-rays		P4		Demo	1	OSPE/OSCE	
53		Comply to SOPs	comply to SOPs for X- ray illuminator			A4	Role Play			

TOPIC: Acute Myocardritis , pericardritis & Infective Endocardritis										
54	Week-7-8	Basic definition	Define acute myocarditis, pericardritis, and endocarditis	C1			Interactive Lecture/SGD	2	MCQs/SEQs	5
55		Clinical features	Describe the clinical features of acute myocarditis, pericardritis, and endocarditis	C2						
56		Causes	Enlist causes of acute myocarditis, pericardritis, and endocarditis	C2						
57		Pathophysiology	Explain the pathophysiology of acute myocarditis, pericardritis, and endocarditis	C3						
58		Diagnosis	Advise various investigations for the diagnosis of acute myocarditis, pericardritis, and endocarditis	C4						
59		Management	Build a treatment plan for acute myocarditis, pericardritis, and endocarditis	C4						
60		Practical performance	Practical demonstration on interpretation of ECG changes of Myocarditis patients		P4		Demo	1	OSPE/OSCE	
61		Ethical norms	Maintain the ethical norms of patients			A4	Role Play			
TOPIC: CARDIAC ARRHYTHMIA										
62	Week-9	Definition	Define Cardiac Arrhythmia	C1			Interactive Lecture/SGD	2	MCQs/SEQs	5
63		Types	Enlist defferent types of Cardiac Arrhythmia	C1						
64		Pathophysiology	Explain Pathophysiology of Cardiac Arrhythmia	C2						
65		Clincal features	Discuss clinical feature of Cardiac Arrhythmia	C2						
66		Diagnosis	Advise investigation for Arrhythmia	C3						
67		Management	Build a treatment plan for the management of Arrhythmia	C4						
68		Practical performance	Practical Demonstration of Different Types of Cardiac Arrhythmias Using ECG Paper		P4		Demo	1	OSPEOSCE	
69		Counseling	Counseling of patient for prioritize deep breathing as a primary technique for managing stress			A4	Role Play			
TOPIC: UPPER RESPIRATORY TRACT INFECTIONS										
70	Week-10	Anatomy and physiology	Explain the functional anatomy and physiology of the respiratory system	C1			Interactive Lecture/SGD	2	MCQs/SEQs	5
71		Definition	Define acute coryza, sinusitis, rhinitis, Phyringitis, and laryngitis	C1						
73		Clinical feature	Discuss the clinical features of rhinitis, sinusitis, Phyringitis, and laryngitis	C2						
74		Pathogenesis	Explain the pathogenesis of upper respiratory tract disease	C3						
75		Diagnosis	Advise various investigations for the diagnosis of acute coryza, sinusitis, rhinitis, Phyringitis and laryngitis	C4						
76		Management	Build a treatment plan for the management of acute coryza, sinusitis, rhinitis, Phyringitis and laryngitis	C4						
77		Practical performance	Practical demonstration of phlebotomy and IV cannula insertion		P4		Demo	1	OSPE/OSCE	
78		Counseling	Counseling of patient for Iv cannulation			A4	Role Play			
TOPIC: OBSTRUCTIVE LUNG DISEASE (ASTHMA)										

79	Week-11	Definition	Define asthma and status asthmaticus	C1			Interactive Lecture/SGD	2	MCQs/SEQs	4
80		Precipitating factors	List the precipitating factors for asthma	C2						
81		Types	Discuss the types of asthma	C3						
82		Etioloy	Outline various causes of asthma and status asthmaticus	C2						
83		Pathophysiology	Illustrate the pathophysiology of asthma	C4						
84		Clinical manifestations	Interpret the clinical features of asthma	C4						
85		Investigations	Interpret investigations for the diagnosis of asthma	C4						
86		Management	Recommend stratagies of the management of asthma	C4						
87		Practical performance	Perfrom the procedure of spirometry independently		P4		Demo	1	OSPE/OSCE	
88		Comply to SOPs	Comply to SOPs for the Spirometry			A4	Role Play			
TOPIC: OBSTRUCTIVE LUNG DISEASE (COPD)										
89	Week-12	Introduction	Define chronic obstructive pulmonary disease	C1			Interactive Lecture/SGD	2	MCQs/SEQs	5
90		Pathophysiology	Explain the pathophysiology of chronic obstructive pulmonary disease	C2						
91		Clinical manifestations	Discuss the clinical manifestations of chronic obstructive pulmonary disease	C2						
92		Diagnostic studies	interpret various investigations for the diagnosis of chronic obstructive pulmonary disease	C3						
93		Treatment	Recommend treatment stratagies for the management of asthma and status asthmaticus	C4						
94		Practical performance	Perfom the procedure of pulmonary function test independently		P4		Demo	1	OSPE/OSCE	
95		Comply to SOPs	Comply to SOPs for the application of pulmonary function test			A4	Role Play			
TOPIC: PULMONARY TUBERCULOSIS										
96	Week-13	Definition	define Pulmonary Tuberculosis	C1			Interactive Lecture/SGD	2	MCQs/SEQs	4
97		Pathophysiology	Discuss pathophysiology of Pulmonary Tuberculosis	C2						
98		Clinical manifestations	Discuss the clinical manifestations of Pulmonary Tuberculosis	C2						
99		Diagnostic studies	interpret various investigations for the diagnosis of Pulmonary Tuberculosis	C3						
100		Treatment	Recommend treatment stratagies for the management of Pulmonary Tuberculosis	C2						
101		Practical performance	Practical demonstration for their identification of Pulmonary TB using Chest X-ray		P4		Demo	1	OSPE/OSCE	
102		Comply to SOPs	Comply to SOPs for X- ray illuminator			A4	Role Play			
TOPIC: PULMONARY EMBOLISM										
103	Week-14	Definition	Define pulmonary thromboembolism	C1			Interactive Lecture/SGD	2	MCQs/SEQs	4
104		Origin of the embolus	Enlist various origin sites for pulmonary thromboembolism	C2						
105		Risk factors	Describe the risk factors for pulmonary embolism	C3						
106		Pathophysiology	Explain the pathophysiology of pulmonary embolism	C3						

107		Clinical manifestations	Discuss the clinical manifestations of pulmonary embolism	C2						
108		Diagnostic studies	Advise the investigations for the diagnosis of pulmonary embolism	C4						
109		Management	Build management strategies for pulmonary embolism	C4						
110		Practical performance	video demonstration on a CT pulmonary angiogram for the diagnosis of pulmonary embolism		P4		Demo	1	OSPE/OSCE	
111		Comply to SOPs	Comply to SOPs for the observation of CT pulmonary angiogram for the diagnosis of pulmonary embolism			A4	Role Play			
TOPIC: PNEUMONIA										
112	Week-15	Introduction	Define pneumonia	C1			Interactive Lecture/SGD	2	MCQs/SEQs	4
113		Classification	Classify pneumonia into various types	C2						
114		Clinical presentation	Describe the clinical features of pneumonia	C3						
115		Diagnostic studies	Advise various investigations for the diagnosis of pneumonia	C4						
116		Treatment	Build treatment strategies for the management of pneumonia	C4						
117		Complications	Evaluate the various complications of pneumonia	C5						
118		Practical performance	Demonstrate a chest x-ray for the diagnosis of pneummonia independently		P4		Demo	1	OSPE/OSCE	
119		Comply to SOPs	Comply to SOPs for the observation of chest X- ray for the diagnosis of pneumonia			A4	Role Play			
TOPIC: HEMOTHORAX & PNEUMOTHORAX										
120	Week-16	Definition	Define Hemothorax and Pneumothorax	C1			Interactive Lecture/SGD	2	MCQs/SEQs	6
121		Etiology	Explain causes of Hemothorax and Pneumothorax	C2						
122		Classification	Classify Pneumothorax							
123		Clinical presentation	Describe the clinical features of Hemothorax and Pneumothorax	C3						
124		Diagnostic studies	Advise various investigations for the diagnosis of Hemothorax and Pneumothorax	C4						
125		Treatment	Build treatment strategies for the management of Hemothorax and Pneumothorax	C4						
126		Complications	Evaluate the various complications of Hemothorax and Pneumothorax							
127		Practical performance	Vedio Demonstration on chest tube insertion		P4		Demo	1	OSPE/OSCE	
128		Ethical norms	Maintain the ethical norms of patients during procedure			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

ASSESSMENT BREAKDOWN				
S.No	**Topics**	**No of MCQs**	**No of OSPE / OSCE Stations**	**Static / Interactive**
1	Complete History Taking	5	1	Static
2	General Physical Examination	5	2	Static and Interactive
3	Systemic Hypertension	5	1	Static
4	Coronary Artery disease ,Angina Pectoris	4	1	Static
5	MI	4	1	Static and Interactive
6	Heart Failure	5	1	Static
7	Acute Myocardritis , pericardritis & Infective Endocardritis	5	1	Static
8	Cardiac Arrhythmia	5	1	Static
9	Upper respiratory tract Infections	5	1	Static
10	Obstructive Lung disease (Asthma)	4	1	Static
11	Obstructive Lung disease (COPD)	5	1	Static
12	Pulmonary Tuberculosis	4	1	Static
13	Pulmonary Embolism	4	1	Static
14	Pneumonia	4	1	Static
15	Hemothorax	3	1	Static
16	Pneumothorax	3	1	Static
Total	**16**	**70**	**14**	**14**

BHS – 603 Gastrointestinal and Hepatobiliary 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 assess gastrointestinal disease, liver disease, and bladder disease, and to also understand the functional anatomy of the GIT and liver

Learning Objectives

Cognitive Domain

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

1. Obtained relevant functional anatomy and Physiology of the Alimantory canal, liver, and bilary tract.
2. identifying treatment plans that are needed for each individual patient.
3. 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. Assess and monitor the patients Gasterointestinal disease
2. Assess and differentiate different liver and bilary tract disease
3. Understand basic physiology and anatomy of GIT and Liver

Affective Domain

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

1. Comply to SOP for various GI proedure
2. Comply to SOPs for NG tube
3. Comply to SOPs for Clinical Examination

TABLE OF SPECIFICATIONS

TOS- GASTROINTESTINAL AND HEPATOBILIARY DISEASE 3(2+1)

S.No	Weeks	Contents	Learning Outcome	Domain C	Domain P	Domain A	MIT's	Time/Hours	Assessment	No of Items
TOPIC: FUNCTINAL ANATOMY, PHYSIOLOGY OF THE GASTROINTESTINAL TRACT, AND INVESTIGATION OF GIT DISEASE										
1	Week-1	Introduction	Introduce GIT System	C1			Interactive Lecture/SGD	2	MCQs	6
2		Anatomy of the Gasteroitestinal Tract	Explain the Anatomy and Physiology of the Gasteroitestinal Tract	C2						
3		Physiology of the Gasterointestinal Tract	Explain the Physiology of the Gasterointestinal Tract	C2						
4		Nerve supply of the gastro-intestinal tract	Explain the nerve supply of the gastrointestinal tract	C2						
5		Investigation of Gastrointestinal Disease	Advise an investigation for the diagnosis of gastrointestinal disease	C3						
6		Practical performance	Practical demonstration of the GI tract through models /charts		P4		Demo	1	OSPE/OSCE	
7		comply to SOPs	comply to SOPs for use of models/charts			A4	Role Play			
TOPIC: PRESENTING PROBLEMS IN GASTROINTESTINAL DISEASE										
8	Week-2	Definition	Define dysphagia, dyspepsia, and vomiting	C1			Interactive Lecture/SGD	2	MCQs	6
9		Causes	Enlist causes of dysphagia, dyspepsia, and vomiting	C1						
10		Clinical feature	Describe clinical feature of dysphagia, dyspepsia, and vomiting	C2						
11		Diagnosis	Advise an investigation for the diagnosis of dysphagia and dyspepsia	C3						
12		Management	Build a treatment plan for the management of dysphagia, dyspepsia, and vomiting	C4						
13		Practical performance	Practical demonstration of gastrointestinal physical examination		P4		Demo	1	OSPE/OSCE	
14		Counseling	Communicate the process before going to examine physically			A4	Role Play			
TOPIC: APHTHOUS ULCERATION										
15	Week-3	Definition	Define Aphthous ulcer	C1			Interactive Lecture/SGD	2	MCQs	4
16		Causes	Enlist causes of Aphthous ulcer	C1						
17		Clinical Feature	Describe the clinical features of an Aphthous ulcer	C1						
18		Differential diagnosis	Discuss Differential diagnosis of the Aphthous ulcer	C2						

19		Diagnosis	Advise an investigation for the diagnosis of Aphthous ulcer	C3						
20		Management	Build a treatment plan for Aphthous ulcer	C4						
21		Practical performance	Vedio demonstration of Aphthous ulceration		P4		Demo	1	OSPE/OSCE	
22		Ethical norms	Maintain the ethical norms of patients in order to asses Aphthous ulceration			A4	Role Play			
TOPIC: GASTRO-OESOPHAGEAL REFLUX DISEASE (GERD)										
23	Week-4	Definition	Define gastro-oesophageal reflux disease (GORD)	C1			Interactive Lecture/SGD	2	MCQs	4
24		Pathophysiology	Explain the pathophysiology of GERD	C3						
25		Clinical feature	Describe the clinical features of GERD	C2						
26		Diagnosis	Advise various investigations for the diagnosis of gastroesophageal reflux disease	C4						
27		Management	Build a treatment plan for gastroesophageal reflux disease	C4						
28		Complications	Enlist various complications associated with gastroesophageal reflux disease.	C2						
29		Practical performance	Vedio demonstration of the barium swallow test		P4		Demo	1	OSPE/OSCE	
30		Comply to SOPs	comply to SOPs for the use of X-ray in Barium swallow test			A4	Role Play			
TOPIC: UPPER & LOWER GI BLEED										
31	Week-5	Introduction	Introduce GI Bleed	C1			Interactive Lecture/SGD	2	MCQs	5
32		Etiology	Enlist causes of upper and lower GI bleed	C2						
33		Causes	Enlisted causes of Lower and Upper GI bleed	C2						
34		Clinical Feature	Discuss the clinical features of upper and lower GI bleed	C2						
35		Initial assesment	Examine the initial bleeding from the GI tract	C3						
35		Diagnosis	Advise various investigations for the diagnosis of upper and lower GI bleeds	C3						
36		Management	Build a treatment plan for the treatment of upper and lower GI bleeds	C4						
37		Complications	Enlist various complications associated with upper and lower GI bleeding	C3						
38		Practical performance	Practical Performance of the Nasogastric Tube		P4		Demo	1	OSPE/OSCE	
39		Counseling	Communicate the process before going to insert NG tube			A4	Role Play			
TOPIC: GASTRITIS										
40	Week-6	Definition	Define Gastritis	C1			Interactive Lecture/SGD	2	MCQs	4
41		Clinical features	Describe the clinical feature of Gastritis	C1						
42		Causes	Enlist causes of Gastritis	C1						
43		Pathophysiology	Explain the pathophysiology of Gastritis	C2						
44		Diagnosis	Advise various investigations for the diagnosis of Gastritis	C3						
45		Management	Build a treatment plan for Gastritis	C4						
46		Practical performance	Vedio demonstration of gastroscopy		P4		Demo	1	OSPE/OSCE	

47		SOPs compliance	Comply Sops for Vedio demonstration of gastroscopy			A4	Role Play			
TOPIC: PEPTIC ULCER DISEASE										
48	Week-7	Definition	Define peptic ulcer disease	C1			Interactive Lecture/SGD	2	MCQs/SEQs	5
49		Clinical features of peptic ulcer disease	Describe the clinical features of peptic ulcer disease	C2						
50		Causes	List the causes of peptic ulcer disease	C2						
51		Pathophysiology	Explain the pathophysiology of peptic ulcer disease	C3						
52		Diagnosis	Advise various investigations for the diagnosis of peptic ulcer disease	C4						
53		Management	Build a treatment plan for peptic ulcer disease	C4						
54		Practical performance	Vedio demonstration of colonoscopy		P4		Demo	1	OSPE	
55		Comply to SOP	comply to SOPs for Colonoscopy			A4	Role Play			
TOPIC: MALABSORPTION										
56	Week-8	Definition	Define Malabsorption	C1			Interactive Lecture	2	MCQs/SEQs	4
57		Causes	Explain different cause of Malabsorption	C1						
58		Pathophysiology	Explain the pathophysiology of Malabsorption	C3						
59		Clinical Feature	Discuss the clinical features of Malabsorption	C2						
60		Diagnose	Advise various investigations for the diagnosis of Malabsorption	C3						
61		Treatment	Build a treatment plan for Malabsorption	C4						
62		Practical performance	Demonstrate the process of conducting a health screening, in order to assess nutritional deficiencies due to malabsorption		P4		Demo	1	OSPE	
63		Counseling	Counseling of the patients for prioritizing regular health screenings routine			A4	Role Play			
TOPIC: JAUNDICE										
64	Week-9	Anatomy and physiology	Explain the functional anatomy and physiology of the liver and bilary tract	C1			Interactive Lecture/SGD	2	MCQs/SEQs	5
65		Definition	Define Jaundice	C1						
66		Causes	Enlist causes of jaundice	C1						
67		Clinical feature	Describe the clinical features of jaundice	C2						
68		Pathogenesis	Explain the pathogenesis of jaundice	C3						
69		Diagnosis	Advise various investigations for the diagnosis of jaundice	C3						
70		Management	Build a treatment plan for the management of jaundice	C4						
71		Practical performance	Practically demonstrate jaundice by inspecting the sclera and skin under natural light		P4		Demo	1	OSPE/OSCE	
72		Ethical norms	Maintain the ethical norms of patients in order to asses Jaundice		A4		Role Play			
TOPIC: ACUTE LIVER FAILURE										
73	Week-10	Definition	Define acute liver failure	C1			Interactive Lecture/SGD	2	MCQs/SEQs	4
74		Classification	Classify acute liver failure	C1						

75		Pathophysiology	Explain the pathophysiology of acute liver failure	C3						
76		Clinical manifestations	Discuss the clinical manifestations of acute liver failure	C2						
77		Diagnostic studies	Advise various investigations for the diagnosis of acute liver failure	C3						
78		Treatment	Build a treatment plan for the treatment of acute liver failure	C4						
79		Complications	Enlisted complications of acute liver failure	C4						
80		Practical Performance	Video demonstration on ascitic tap		P4		Demo	1	OSPE/OSCE	
81		Comply to SOPs	Comply to SOPs for the observation of asctic tap			A4	Role Play			
TOPIC: ACUTE APPENDICITES										
82	Week-11	Definition	Define Acute Appendicitis	C1			Interactive Lecture/SGDs	2	MCQs/SEQs	4
83		Causes	Explain the different causes of Acute Appendicitis	C2						
84		Clinical feature	Explain the clinical features of acute appendicitis	C3						
85		Pathogenesis	Explain the pathogenesis of Appendicitis	C2						
86		Diagnosis	Advise various investigations for the diagnosis of Appendicitis	C4						
87		Management	Build a treatment plan for the management of Appendicitis	C4						
88		Practical performance	Perfrom the practical demonstration on the palpation method use for Diagnosis of Appendicitis		P4		Demo	1	OSPE/OSCE	
89		Ethical norms	Maintain the ethical norms of patients in order to asses appendicitis			A4	Role Play			
TOPIC: ACUTE PANCREATITIS										
90	Week-12	Definition	Define acute Pancreatitis	C1			Interactive Lecture/SGD	2	MCQs/SEQs	3
91		Causes and Classification	write the causes and Classify Acute Pancreatitis	C2						
92		Pathophysiology	Explain the pathophysiology of acute Pancreatitis	C3						
93		Clinical manifestations	Discuss the clinical manifestations of acute Pancreatitis	C2						
93		Diagnostic studies	Advise various investigations for the diagnosis of acute Pancreatitis	C4						
94		Treatment	Build a treatment plan for the treatment of acute Pancreatitis	C3						
95		Complications	Enlisted complications of acute Pancreatitis	C4						
96		Practical performance	Demonstrate RDT for the diagnosis of acute pancreatitis		P4		Demo		OSPE/OSCE	
97		Comply to SOPs	Comply to SOPs for the observation of RDT in order to diagnosis of acute pancreatitis			A4	Role Play			
TOPIC: HEMORRHOIDS										
98	Week-13	Definition	Define Hemorrhoids	C1			Interactive Lecture/SGD	2	MCQs/SEQs	4
99		Etiology	Enlist causes of the Hemorrhoids	C2						
100		Clinical Features	Discuss the clinical features of Hemorrhoids	C3						
101		Pathophysiology	Expain pathophysiology of Hemorrhoids	C2						
102		Diagnosis	Advise the investigation for the diagnosis of Hemorrhoids	C4						
103		Management	Build a treatment plan for Hemorrhoids	C4						

103		Practical performance	Vedio demonstration of Auscultaion of Bowel sound		P4		Demo	1	OSPE	
104		Counseling	Counseling of the patients for bowel sound Ascultation			A4	Role Play			
TOPIC: NON-ALCOHLIC FATTY LIVER DISEASE										
105	Week-14	Definition	Define Non-Alcohlic Fatty Liver Disease	C1						4
106		Clinical Features	Discuss the clinical features of non-alcoholic fatty liver disease.	C1						
107		Pathophysiology	Expain pathophysiology of non-alcoholic fatty liver disease	C3						
108		Etiogy	Enlist the causes of non-alcoholic fatty liver disease	C2						
109		Diagnosis	Advise the investigation for the diagnosis of non-alcoholic fatty liver disease	C3						
110		Management	Build a treatment plan for non-alcoholic fatty liver disease	C4						
111		Practical performance	Perform an abdominal examination, focusing on palpation and percussion techniques to assess liver size, tenderness,		P4		Vedio Demo	1	OSPE/OSCE	
112		Ethical norms	Maintain the ethical norms of patients in order to examine			A4	Role Play			
TOPIC: VIRAL HEPATITIS B & C										
113	Week-15	Introduction	Introduce Viral Hepatitis B & C	C1			Interactive Lecture/SGD	2	MCQs/SEQs	4
114		Clinical feature	Discuss the clinical feature of Viral Hepatitis B & C	C2						
115		Etiology	Enlist the causes of Viral Hepatitis B & C	C2						
116		Pathophysiology	Explain the pathophysiology of Viral Hepatitis B & C	C3						
117		Diagnosis	Advise the investigation for the diagnosis of Hepatitis B & C	C4						
118		Prevention	Outline the preventive measures and vaccination strategies for Hepatitis B & C	C4						
119		Practical performance	Practical Perform an abdominal examination, focusing on the liver and spleen enlargement		P4		Demo	1	OSPE/OSCE	
120		Ethical norms	Maintain the ethical norms of patients in order to examine Spleen			A4	Role Play			
TOPIC: CHOLECYSTITIS										
121	Week-16	Definition	Define Cholecystitis	C1			Interactive Lecture/SGD	2	MCQs/SEQs	4
122		Clinical feature	Discuse the clinical diagnosis of Cholecystitis	C1						
123		Etiology	Enlist the causes of Cholecystitis	C2						
124		Pathophysiology	Explain the pathophysiology of Cholecystitis	C3						
125		Diagnosis	Advise the investigation for the diagnosis of Cholecystitis	C3						
126		Management	Build a treatment plan for Cholecystitis	C4						
127		Practical performance	Perfrom the practical demonstration of the Morphy sign for cholycistitis		P4		Demo	1	OSPE/OSCE	
128		Ethical norms	Maintain the ethical norms of patients in order to asses Morphy sign			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

ASSESSMENT BREAKDOWN				
S.No	**Topics**	**No of MCQ**	**No of OSPE / OSCE Stations**	**Static / Interactive**
1	Functinal Anatomy, Physiology of the Gastrointestinal Tract, and Investigation of GIT Disease	6	1	Static
2	Presenting problems in gastrointestinal disease	6	2	Static and Interactive
3	Aphthous Ulceration	4	1	Static
4	Gastro-oesophageal reflux disease (GERD)	4	1	Static
5	Upper & Lower GI bleed	5	1	Static
6	Gastritis	4	1	Static
7	Peptic ulcer disease	5	1	Static
8	Malabsorption	4	1	Static
9	Jaundice	5	1	Static
10	Acute liver failure	4	1	Static
11	Acute Appendicitis	4	1	Static
12	Acute Pancreatitis	3	1	Static
13	Hemorrhoids	4	1	Static
14	Non-Alcohlic Fatty liver Disease	4	1	Static
15	Viral Hepatitis B & C	4	1	Static
16	Cholecystitis	4	1	Static
Total	**16**	**70**	**14**	**14**

BHS-604 First Aid 3(2+1)

Course Description

This course has been designed to Understand the fundamental concepts of First Aid, including its importance and the scenarios where it is applicable. Develop the ability to quickly assess emergencies and determine the appropriate First Aid measures. Learn and practice essential First Aid techniques, such as CPR, wound care, and stabilization of injuries and certain medical emergencies.

Learning Objectives

Cognitive Domain

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

1. Comprehend the basic principles and objectives of First Aid, including the priorities in emergency care
2. Analyze various emergency scenarios and determine the most effective First Aid interventions
3. Evaluate the severity of injuries or conditions and decide on the appropriate First Aid actions or whether further medical assistance is needed

Psychomotor Domain

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

1. Demonstrate proficiency in performing CPR and other life-saving techniques
2. Apply correct procedures for cleaning, dressing, and bandaging wounds
3. Effectively immobilize fractures and other injuries to prevent further harm
4. Properly utilize tools and First Aid instruments and equipment

Affective Domain

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

1. Recognize the responsibility of providing First Aid and ensuring the safety and well-being of those in need
2. Adhere to ethical standards in emergencies, respecting the dignity and rights of all individuals
3. Display confidence in taking initiative during emergencies, ensuring prompt and appropriate action

TABLE OF SPECIFICATIONS

TOS-FIRST AID 3(2+1)

S.No	Weeks	Contents	Learning Outcome	Domain C	Domain P	Domain A	MIT's	Time/Hours	Assessment	No of Items
TOPIC: INTRODUCTION TO FIRST AID										
1	Week-1	Definition	Define First Aid , emergency and safety procedure	C1			Interactive Lecture/SGD	2	MCQs	3
2		Importance and General Principles	Discuss the importance of First Aid and the general principles guiding	C2						
3		First Aid Box/kit	Discuss the essential items in a First Aid box and their proper usage in various emergencies	C2						
4		Role and Responsibilities of a First Aider	Discribe a detailed description of the roles, responsibilities, and limitations of a First Aider, emphasizing the importance of professionalism in emergencies	C2						
5		Risk Assessment and Safety Protocols	Explain methods for conducting a thorough risk assessment to ensure the safety of both the First Aider and the victim	C2						
6		Recognizing the Emergency	Explain the clue that can help recognizing the emergency situation	C3						
7		Practical	Practically demonstrate the proper uses and contents of a first aid kit		P4		Demo	1	OSPE/OSCE	
8		SOPs compliance	Adopt how to take care of first aid kit			A4	Role Play			
TOPIC: PRIMARY AND SECONDARY SURVEY										
9	Week-2	Introduction	Introduce the concept of a primary	C1			Interactive Lecture/SGD	2	MCQs	6
10		Roles of Primary and Secondary survey	Identify role in assessing and managing immediate life-threatening conditions	C2						
11		Component of Primary Survey (DRABC)	Describe the components of the DRABC protocol used in the primary survey	C1						
12		Secondary Survey	Define secondary survey and explain its purpose in providing a more detailed assessment of the patient.	C1						
13		Components of secondary survey	List and explain the major components of the secondary survey, focusing on a systematic head-to-toe examination.	C2						
14		Importance of primary and secondary survey	Discuss the significance of conducting both primary and secondary surveys in providing comprehensive emergency care.	C2						
15		Early recognition	construct knowledge to recognize early signs of sepsis and initiate appropriate interventions	C3						
16		Practical performance	Vedio Demonstration on initial management such as fluid resuscitation and immobilization		P4		Demo	1	OSPE/OSCE	
17		SOPs compliance	Adopt how to take care of blood born disease transmission			A4	Role Play			
TOPIC: BASIC LIFE SUPPORT (BLS)										
18	Week-3	Definition	Define Basic Life Support	C1			Interactive Lecture/SGD	2	MCQs	4
19		Key Components	Identify the key components of BLS, including chest compressions, airway	C1						

			management, and rescue breathing							
20		Indications for BLS	Describe situations where BLS is required, such as cardiac arrest, drowning, and respiratory failure	C2						
21		BLS Protocol	Explain the basic BLS protocol	C2						
22		Equipment and Resources	Discuss essential equipment for BLS, such as Automated External Defibrillators etc.	C2						
23		BLS Sequence (C-A-B)	Explain the C-A-B (Circulation-Airway-Breathing) sequence recommended in BLS	C2						
24		CPR Techniques for Adults, Children, Infants and Pregnancy	Describe the differences in CPR techniques for adults, children, and infants, including compression depth and breath ratio	C2						
25		Automated External Defibrillator (AED)	Discribe the steps for using an AED, including when and how to apply it, and safety precautions during its use	C2						
26		Errors and Precautions	Identify common errors in performing BLS, such as incorrect hand placement or compression depth, and precautions to ensure effective care	C2						
27		Practical	Conduct a CPR demonstration on a manikin in the skill lab		P4		Demo	1	OSPE/OSCE	
28		Ethical norms	Maintain the ethical norms of patients in order to perform CPR			A4	Role Play			
		TOPIC: DRESSINGS, PADS AND BANDAGES								
29	Week-4	Definition	Define dressings, pads, and bandages	C1			Interactive Lecture/SGD	2	MCQs	4
30		Types of Dressings, Pads, and Bandages	Describe various types of dressings, pads, and bandages, including their specific clinical indications	C1						
31		Clinical significance	Discuss the clinical significance of dressings, pads, and bandages in promoting wound healing, protecting wounds, and preventing infection	C2						
32		Application Techniques	Explain the correct application techniques for different types of dressings and bandages	C2						
33		Complications and Management	Identify potential complications associated with improper use of dressings and bandages, such as infection, pressure ulcers, and impaired circulation, and discuss management strategies.	C3						
34		Practical	Demonstrate various dressing techniques in the skill lab on manikin		P4		Demo	1	OSPE/OSCE	
35		Comply to SOPs	Adopt how to take care of dressing tray and manikin			A4	Role Play			
		TOPIC: FIRST AID FOR FRACTURES AND WOUNDS								
36	Week-5	Definition	Define fractures and wounds	C1			Interactive Lecture/SGD	2	MCQs	5
37		Types	Enlist various types of fractures and wounds	C1						
38		Assessment and Diagnosis	Discuss the clinical assessment and diagnostic approach for identifying fractures and wounds, including signs and symptoms to look for.	C2						
39		Initial Management of Fractures	Explain the initial steps for managing fractures, including immobilization, elevation, and pain management.	C3						
40		Initial Management of Wounds	Outline the initial care for wounds, including wound cleaning, dressing, and infection prevention.	C4						
41		Complications and Management	Identify potential complications associated with fractures (e.g., compartment syndrome, infection) and wounds (e.g., tetanus, delayed healing) and discuss their management.	C4						

42		Monitoring and Follow-Up	Describe the clinical procedures for monitoring fractures and wounds, including signs of complications and the need for follow-up care.	C3						
43		Practical	Practical demonstration on the application of slings and splints		P4		Demo	1	OSPE/OSCE	
44		Comply to SOPs	Adopt how to take care of slings and splints			A4	Role Play			
TOPIC: CHOKING										
45	Week-6	Definition	Define choking and its clinical significance in First Aid	C1			Interactive Lecture/SGD	2	MCQs	4
46		Causes of Choking	Identify common causes of choking	C1						
47		Types of Airway Obstruction	Discuss the types of airway obstruction	C2						
48		Assessment and Diagnosis	Explain the clinical assessment of choking, including signs such as inability to speak, cyanosis, and use of accessory muscles	C3						
49		Immediate Management	Discribe immediate steps for managing choking, including back blows, abdominal thrusts (Heimlich maneuver), and chest thrusts for different age groups and scenarios.	C2						
50		Airway Management Techniques	Discuss advanced airway management techniques if initial interventions fail, such as the use of laryngoscopy, suction, or cricothyrotomy in a clinical setting.	C2						
51		Complications and Management	Identify and manage complications of choking, such as aspiration pneumonia, rib fractures, and hypoxic brain injury.	C3						
52		Practical	Practical demonstartion on choking maneuvers ((Heimlich maneuver)		P4		Demo	1	OSPE/OSCE	
53		Ethical norms	Maintain the ethical norms of patients in order to perform choking maneuvers			A4	Role Play			
TOPIC: HEAT STROKE AND FROSTBITE										
56	Week-7	Definition	Define heat stroke and frostbite	C1			Interactive Lecture/SGD	2	MCQs	5
57		Causes and Risk factors	Identify causes and risk factors for heat stroke and frostbite	C1						
58		Clinical Presentation	Describe the signs and symptoms of heat stroke and frostbite	C2						
59		Assessment &Diagnosis	Explain the clinical assessment for diagnosing heat stroke and frostbite	C3						
60		Management of Heat Stroke & Frostbite	Outline the immediate management of heat stroke, including rapid cooling techniques, hydration & frostbite including gradual rewarming, pain management	C4						
62		Complications	Identify potential complications such as organ failure and tissue necrosis	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: ANAPHYLACTIC REACTION										
63	Week-8	Define	Define allergic reactions	C1			Interactive Lecture/SGD	2	MCQs	4
64		Signs and symptoms	Identify the common signs and symptoms associated with allergic reactions	C1						
65		Anaphylaxis	Describe anaphylaxis and its causes	C2						
66		Differntial	Explain clinical features of anaphylaxis and differentiate it from other types of allergic reactions	C3						

68		Medical decision making	Explain the decision-making process in diagnosing and managing anaphylaxis, including when to escalate care	C3					
69		First and second line Treatment	Describe the first-line and second-line treatments for anaphylaxis, including the use of epinephrine and other medications.	C4					
70		Practical performance			P4	Demo	1	OSPE/OSCE	
71		Counselling	Counsel the patients to encourage their active participation in tetanus vaccine		A4	Role Play			
TOPIC: SEIZURES AND STROKE									
72	Week-9	Definition	Define seizures and stroke.	C1		Interactive Lecture/SGD	2	MCQs	5
73		Types	Enlist different types of seizures and Stroke.	C1					
74		Causes & Risk Factors	identify common causes and risk factors for seizures and Stroke.	C2					
75		Clinical Presentation	Describe the signs and symptoms of seizures and stroke	C2					
76		Assessment and Diagnosis	Explain the clinical assessment for diagnosing seizures and stroke, including the use of the FAST etc.	C3					
77		First Aid in Seizures	Outline the immediate management of seizures, including protecting the patient from injury, maintaining airway patency etc.	C4					
78		First Aid in Stroke	Explain the immediate management of stroke, including maintaining airway, breathing, and circulation (ABCs), positioning the patient.	C4					
79		Referral	Determine when to refer patients with seizures or stroke for advanced care.	C3					
80		Practical performance	Vedio demonstration to Defferentiate pseudo seizure from epilepsy		P4	Demo	1	OSPE/OSCE	
81		Comply to SOPs	Comply sops for Vedio demonstartion		A4	Role Play			
TOPIC: ROADSIDE ACCIDENTS AND PATIENT TRANSPORTATION									
82	Week-10	Definition	Define roadside accidents and patient transportation	C1		Interactive Lecture	2	MCQs	4
83		Types	Enlist common types of roadside accidents	C1					
84		Causes & Risk Factors	Identify causes and risk factors for roadside accidents	C2					
85		Assessment	Explain the clinical assessment of accident victims, including primary and secondary surveys	C3					
86		Management	Recognize the management steps for roadside accident injuries	C3					
87		Patient Transportation	Describe safe patient transportation methods	C2					
88		Practical	Vedio Demonstration Perform different techniques of Casualty Transportation		P4	Demo	1	OSPE	
90		Comply to SOPs	Comply to SOPs for the Vedio demonstration		A4	Role Play			
TOPIC: FEVER AND ABDOMINAL PAIN									
91	Week-11	Definition	Define fever	C1		Interactive Lecture	2	MCQs	4
92		Causes	Identify the common and significant causes of fever	C1					
93		Adverse effect of fever	Describe the potential adverse effects of fever	C2					
94		General first aid	Outline the general principles of first aid management for fever	C2					
95		Introduce abdominal	Provide an overview of abdominal pain, its significance	C1					

		pain								
96		Causes of abdominal pain	List and explain the potential causes of abdominal pain, ranging from benign to life-threatening conditions	C2						
97		Emergency sign and symptoms	Identify the emergency signs and symptoms of abdominal pain in adults and children that require immediate attention	C2						
98		Key components of medical evaluation	Explain the key components of medical evaluation for abdominal pain, using frameworks like OLD CHART, SOAP, and PQRST	C2						
99		First aid management in adults and children	Discuss the first aid management strategies for abdominal pain in adults and children, including when to refer to a physician.	C3						
100		Practical	Practical demonstration of temperature measurement by Thermometer		P4		Demo	1	OSPE	
101		Counselling	Counsel the patients to check their temperature			A4	Role Play			
TOPIC: NEAR DROWNING, DIARRHEA AND VOMITING										
102	Week-12	Definition of drowning	Define drowning	C1			Interactive Lecture	2	MCQs	6
103		Type of drowning	Enlist different types of drowning	C1						
104		First aid management	Outline the first aid management steps for a drowning victim	C2						
105		Diarrhea and causes of diarrhea	Define diarrhea and discuss its major causes, including infections, dietary factors, and medical conditions.	C2						
106		Consequences and signs of dehydration	Describe the adverse effects of diarrhea, with a focus on dehydration, and list the signs and symptoms of dehydration.	C2						
107		vomiting and its causes	Explain the mechanism of vomiting and identify the primary causes	C2						
108		First aid management of diarrhea & vomiting	Describe the management of diarrhea and vomiting	C3						
109		Practical	Practical Demonstration of ORS preparation		P4		Demo	1	OSPE	
110		Comply to SOPs	Comply to SOPs for the preparation of ORS			A4	Role Play			
TOPIC: SPORTS INJURIES AND EPISTAXIS										
111	Week-13	Definition	Define sports injuries	C1			Interactive Lecture	2	MCQs	4
112		Factors	Explain the factors contributing to the occurrence of sports injuries	C1						
113		Classification	Enlist sports injuries	C1						
114		Causes	Identify the common causes of sports injuries	C2						
115		First aid	Outline the first aid management steps for common sports injuries	C3						
116		Define Epistaxis	Define epistaxis and explain the physiological mechanisms that lead to nosebleeds.	C1						
117		causes of Epistaxis	Identify the common causes of epistaxis.	C2						
118		First aid	Outline the first aid management steps for common epistaxis	C3						
119		Practical performance	Vedio demonstration of different techniques used for epistaxis		P4		Demo	1	OSPE/OSCE	
120		Comply to SOPs	Comply to SOPs for the techniques			A4	Role Play			
TOPIC: FIRST AID OF HYPOGLYCEMIA AND HYPOTENSION										
121	Week-	Definition	Define hypoglycemia	C1			Interactive	2	MCQs	4

122	14	Causes	Identify the common causes of hypoglycemia	C2			Lecture			
123		Signs and symptoms	Describe the signs and symptoms of hypoglycemia	C1						
124		First aid management	Outline the first aid management steps for hypoglycemia	C3						
125		Hypotension	Define hypotension	C1						
126		Causes	Identify and explain the causes of hypotension	C2						
127		First aid management	Describe the first aid management plan for hypotension	C3						
128		Practical	Practical demonstration on blood glucose Level Checking with help of glucometer		P4		Demo	1	OSPE/OSCE	
129		Comply to SOPs	Comply to SOPs for the Glucometer			A4	Role Play			
			TOPIC: Bites and Sting							
130	Week-15	Bee, Wasp, Hornet sting	Describe the effects of stings from bees, wasps, and hornets, including common symptoms and potential allergic reactions.	C1			Interactive Lecture	2	MCQs/SEQs	4
131		Scorpion sting and spider bite	Identify the symptoms and risks associated with scorpion stings and spider bites.	C2						
132		Snake bite	Explain the different types of snake bites (venomous vs. non-venomous) and their clinical presentations.	C2						
133		Dog bite	Discuss the risks associated with dog bites, including infection and rabies transmission, and recognize signs of severe bites.	C2						
134		cat bite	Describe the unique risks of cat bites, including infection	C2						
135		First aid managements of mentioned cases	Outline the first aid management steps for each of the mentioned cases, including wound care, symptom monitoring, and when to seek professional medical care.	C3						
136		Practical	Demo on Dog bite vaccinations schedule		P4		Demo	1	OSPE	
137		Comply to SOPs	Comply to SOPs for the vaccination			A4	Role Play			
			TOPIC: ALTERED MENTAL STATUS AND COMA							
138	Week-16	Introduction	Introduce Altered Mental Status (AMS) and coma	C1			Interactive Lecture	2	MCQs/SEQs	4
139		Causes	Discuss the common causes of AMS and coma	C2						
140		Vital signs and rapid neurological examination	Explain the importance of assessing vital signs and performing a rapid neurological examination in patients with AMS or coma	C2						
141		General examination and ancillary history	Describe the process of conducting a general examination and obtaining ancillary history to identify underlying causes	C2						
142		Emergency management	Outline the emergency management steps for patients with AMS or coma	C3						
143		Practical	Practical demonstartion of GCS		P4		Demo	1	OSPE	
144		Ethical norms	Maintain the ethical norms of patients in order to check GCS			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

ASSESSMENT BREAKDOWN				
S.No	**Topics**	**No of MCQ**	**No of OSPE / OSCE Stations**	**Static / Interactive**
1	Introduction to First Aid	3	1	Static
2	Primary and Secondary Survey	6	2	Static and Interactive
3	Basic Life Support (BLS)	4	1	Static and Interactive
4	Dressings, Pads and Bandages	4	1	Interactive
5	First Aid for Fractures and Wounds	5	1	Interactive
6	Choking	4	1	Static and Interactive
7	Heat Stroke and Frostbite	5	1	Interactive
8	Anaphylactic Reaction	4	1	Interactive
9	Seizures and Stroke	5	1	Interactive
10	Roadside Accidents and Patient Transportation	4	1	Interactive
11	Fever and Abdominal Pain	4	1	Interactive
12	Near Drowning, Diarrhea and Vomiting	6	1	Interactive
13	Sports Injuries and Epistaxis	4	1	Interactive
14	First aid of Hypoglycemia and Hypotension	4	1	Interactive
15	Bites and Sting	4	1	Interactive
16	Altered Mental status and Coma	4	1	Interactive
Total	**16**	**70**	**14**	**14**

ANS-609 Critical Care 3(2+1)

Course Description

This course provides undergraduate anesthesia students with foundational knowledge and essential skills in critical care.
It focuses on managing critically ill patients, emphasizing pathophysiology, monitoring techniques, life-support measures, and pharmacological interventions in the intensive care unit (ICU). Students will learn to assess and respond to emergencies, interpret critical care data, and apply evidence-based practices in collaboration with multidisciplinary teams.
The course aims to prepare students to play a proactive role in ICU settings.

Learning Objectives

Cognitive Domain

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

1. Explain the various levels of critical care units and their functions
2. Identify the different steps of BLS and ACLS
3. Explain the different modes of mechanical ventilation.
4. Discuss Respiratory and Metabolic Problems that can affect ABG's interpretations.
5. Identify clinical signs of electrolyte and fluid imbalances

Psychomotor Domain

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

1. Demonstrate different ICU zones and their functions.
2. Demonstrate placement of ECG electrodes, CVP line placement, and Arterial line.
3. Operate the ventilator (settings) based on patient-specific conditions.
4. Insert an enteral feeding tube.

Affective Domain

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

1. Develops a personal routine for the timely checking of monitored parameters.
2. Operate the ventilator (settings) based on patient-specific conditions.
3. Respond to ventilator alarms, assisting in troubleshooting.
4. Show attentiveness in monitoring patients' fluid and electrolyte balance.

5. Acknowledge the potential for post-traumatic stress in thoracic trauma survivors.

TABLE OF SPECIFICATION

TOS-CRITICAL CARE 3(2+1)

S.No	Weeks	Content	Learning Outcome	Domain			MIT's	Time/ Hours	Assessment	No of Items
				C	P	A				
TOPIC: INTRODUCTION TO CRITICAL CARE										
1	Week-1	Introduction	Define Critical care	C1			Interactive Lecture/SGD	2	MCQS	3
2		Types of ICU	Explain the various levels of critical care units and their functions	C2						
3		Admission criteria	Identify the criteria for admitting a patient to the ICU	C3						
4		The equipment	Identify basic equipment's use in critical care	C3						
5		Admission to critical care	Discuss the indications for admission to the ICU	C6						
6		Practical performance	Demonstrate different ICU zones and their functions.		P3		Demo	1	OSPE	2
7		Sop compliance	Commitment to respecting patients' dignity and rights while providing care in the ICU.			A3	Role Play			
TOPIC: INFECTION CONTROL IN THE ICU										
8	Week-2	Definition	Define Nosocomial infection	C1			Interactive Lecture/SGD	2	MCQS	3
9		Causes	Enlist Common infection occurs in critical care	C1						
10		Infection control	Apply infection control protocols in critical care	C3						
11		Infection Control in Critical Care	Differentiate between cleaning, Disinfection, and sterilization.							
12		Protocol	Develop infection control protocol for ICU patients	C6						
13		Practical performance	Observe different isolation rooms in the critical care area.		P1		Demonstration	1	OSPE/OSCE	
14		Practical	Demonstrate proper Hand hygiene techniques		P3		Demonstration			
15		Sop compliance	Display a commitment to maintaining hygiene standards in the ICU.			A2	Role play			
TOPIC: MONITORING IN THE ICU										
17		Monitoring in the	Enlist the types of monitoring used in the ICU	C1			Interactive	2	MCQS	4

	Week-3	ICU					Lecture/SGD			
18		Vital Monitoring	Explain Different basic ICU monitoring (B.P., ECG, CVP, SPO2, Arterial line)	C2						
19		Techniques	Explain the invasive and noninvasive monitoring techniques	C2						
20		Trouble shooting	Identify equipment errors and errors related to the patient	C3						
21		Errors	Identify factors that can interfere with pulse oximetry, ECG, and CVP readings.	C3						
22		Check list	Design a checklist for assessment based on daily ICU monitoring data.	C6						
23		Practical performance	Demonstrate placement of ECG electrodes, CVP line placement, and Arterial line.		P3		Demo	1	OSPE/OSCE	3
24		Sop compliances	The student develops a personal routine for the timely checking of monitored parameters.			A3	Role Play			
TOPIC: CARDIOPULMONARY RECUSATION (BLS, ACLS)										
25	Week-4	Definition	Define cardiopulmonary resuscitation (CPR)	C1			Interactive Lecture/SGD	2	MCQS	6
26		Types of CPR	Briefly Explain Basic life support and advanced cardiac life support	C2						
27		Chain of survival	Explain the chain of survival	C2						
28		Protocol	Identify the indications for initiating CPR.	C3						
29		Steps in CPR	Identify the different steps of BLS and ACLS	C3						
30		Protocol	Identify situations that tend to stop CPR	C3						
31		Post care	Formulate a post-cardiac arrest care protocol	C6						
32		Practical performance	Demonstrate proper chest compression technique, including rate, depth, and recoil.		P3		Demonstration	1	OSPE/OSCE	
33		Sop compliances	Responds positively to instructor feedback regarding accurate chest compression and demonstrates willingness to improve.			A2	Role play			
TOPIC: SHOCK										
34	Week-5	Definition	Define shock and list its different types	C1			Interactive Lecture/SGD	2	MCQS	5
35		pathophysiology	Explain the pathophysiology of each type of shock	C2						
36		Signs and symptoms	Identify the causes, signs, and symptoms of each type of shock	C3						
37		Management	Discuss the initial management strategies for shock, including ABCDE protocols.	C6						
38		Practical performance	Observe the assessment of a patient in shock,		P1		Demonstra	1	OSPE/OSCE	3

			including vital signs.				tion			
39		Sop compliances	Becomes a role model for colleagues by promoting rapid response and focused care for patients in shock.			A5	Role Play			
TOPIC: MECHANICAL VENTILATION										
40	Week-6	Definition	Define mechanical ventilation and its types	C1			Interactive Lecture/SGD	2	MCQS	7
41		Indication	Enlist the indications and contraindications of mechanical ventilation	C1						
42		Types of ventilation	Explain the difference between invasive and non-invasive ventilation	C2						
43		Mode	Explain the different modes of mechanical ventilation.	C2						
44		Complication	Identify potential complications associated with mechanical ventilation.	C3						
45		Setting	Formulate a step-by-step approach to troubleshooting ventilator alarms	C6						
46		Weaning	Develop a weaning protocol for a patient recovering from mechanical ventilation.	C6						
47		Practical performance	Operate the ventilator (settings) based on patient-specific conditions.		P2		Demonstration	1	OSPE/OSCE	4
48		Sop compliances	Operate the ventilator (settings) based on patient-specific conditions.			A4	Role play			
TOPIC: ABG'S INTERPRETATIONS										
49	Week-7	Definition	Define arterial blood gas (ABG)	C1			Interactive Lecture/SGD	2	MCQS	6
50		Normal values	Explain the components of ABGs and their normal values.	C1						
51		Interpretation	Repeat the stepwise approach to interpreting ABG reports	C1						
52		Simple collection	Explain how to take a sample for ABG's Report	C2						
53		Respiratory disorder	Discuss Respiratory and Metabolic Problems that can affect ABG's interpretations and their management	C2						
54		ABGS in ventilated patients	Demonstrate the interpretation of ABG values in a ventilated patient.	C3						
55		Practical performance	Perform an arterial puncture to obtain an ABG sample.		P2		Demo	1	OSPE	2

56		Sop compliances	Makes ABG interpretation a consistent part of clinical decision-making			A5	Role Play			
TOPIC: NUTRITION IN THE ICU										
57	Week-8	Definition	Define enteral and parenteral nutrition	C1			Interactive Lecture/SGD	2	MCQS	3
58		Macronutrients and micronutrients	Enumerate the essential macronutrients and micronutrients required in ICU patients.	C1						
59		Administration	Demonstrate the proper administration of enteral nutrition via NG/PEG tube.	C2						
60		Signs and symptoms	Identify signs of nutritional deficiencies in critically ill patients.	C2						
61		Complication	Discuss complications related to enteral and parenteral nutrition	C2						
62		Plan for nutrition	Develop a nutritional plan for a ventilated ICU patient	C6						
63		Practical performances	Insert an enteral feeding tube under supervision.		P3		Demo	1	OSPE	2
64		Sop compliances	Display sensitivity towards patients' nutritional needs and preferences.			A2	Role Play			
TOPIC: CARE OF PATIENTS ON A VENTILATOR										
65	Week-9	Complication	Enumerate complications associated with long-term mechanical ventilation	C1			Interactive Lecture/SGD	2	MCQS	4
66		Care of a patient on a ventilator	Explain the importance of maintaining airway patency in ventilated patients.	C2						
67		Pneumonia	Identify early signs of ventilator-associated pneumonia (VAP) and barotrauma.	C3						
68		Ulcers	Demonstrate the correct method of repositioning a bedridden patient to prevent pressure ulcers.	C3						
69		Practical performances	Demonstrate proper suctioning techniques to maintain airway clearance and to prevent airway injury.		P3		Demo	1	OSPE	1
70		Sop compliances	Respond to ventilator alarms, assisting in troubleshooting			A2	Role play			
TOPIC: FLUIDS AND ELECTROLYTES BALANCE										

71		Plasma electrolytes	Enlist the major electrolytes and their normal ranges	C1						
72		IV fluids	Classify different IV fluids and their use in the ICU	C2						
73	Week-10	Fluids and Electrolytes balance	Explain the physiological mechanisms that regulate fluid and electrolyte balance.	C2						
74		Clinical signs	Identify clinical signs of electrolyte and fluid imbalances	C3						
75		Management	Discuss management of dehydration vs. fluid overload	C3						
76		Practical performances	Arrange IV fluids, administration sets, and necessary medications for fluid therapy.		P2		Demo	1	OSPE	2
77		Sops compliances	Show attentiveness in monitoring patients' fluid and electrolyte balance.			A2	Role play			
TOPIC: MASSIVE BLOOD TRANSFUSION										
78	Week-11	Definition	Define massive blood transfusion	C1			Interactive Lecture/SGD	2	MCQS	4
79		Blood product	Enlist blood products for a massive blood transfusion	C1						
80		Massive Blood Transfusion	Discuss the importance of the Massive Transfusion Protocol (MTP) in critically ill patients.	C2						
81		Complication	Identify potential complications associated with massive blood transfusion	C3						
82		Management	Formulate strategies for managing transfusion-related	C6						
83		Practical performances	Practice to regulate blood transfusion speed using infusion pumps and blood warmers		P2		Demo	1	OSPE	2
84		Sop compliances	Demonstrate a commitment to minimizing transfusion-associated risks.			A3	Role play			
TOPIC: SEDATION IN ICU										
85	Week-12	Definition	Define sedation and its use in the ICU.	C1			Interactive Lecture/SGD	2	MCQS	4
86		Drugs for sedation	Enlist commonly used sedative drugs in Critical care	C1						
87		Sedation in the ICU	Explain different challenges for sedation in critical care	C2						
88		Types of sedation	Classify deep sedation, light sedation, and minimal sedation	C2						
89		Sedation in ventilated patients	Contrast sedation strategies for mechanically ventilated vs. non-ventilated ICU patients	C4						
90		Complication	Assume possible complications that may arise due to prolonged sedation	C4						
91		Practical performances	Observe protocols for administering sedation in critical care.		P1		Demo		OSPE/OSCE	
92		Sop compliances	Respond to changes in the patient's condition by adjusting sedation levels as needed.			A3				

TOPIC: PAIN MANAGEMENT IN ICU										
93	Week-13	Definition	Define pain and its significance in critically ill patients	C1			Interactive Lecture/SGD	2	MCQS	5
94		Signs and symptoms	What are the common signs of pain in a critically ill patient	C1						
95		Pain Management in the ICU	What are the signs of pain in non-communicative ICU patients	C1						
96		Mechanism of pain	Explain the physiological mechanisms of pain in ICU patients.	C2						
97		Drugs used for pain	Describe the pharmacological and non-pharmacological options for pain management in the ICU.	C2						
98		Side effects in ICU patients	Discuss the potential side effects of pain medications and their Management.	C2						
99		Practical performances	Demonstrate the use of a pain assessment scale in ICU patients		P3		Demo	1	OSPE	2
100		Sop compliances	Demonstrate a commitment to minimizing pain and discomfort for ICU patients by giving a timely and effective analgesia dose.			A3	Role play			
TOPIC: MANAGEMENT OF THORACIC TRAUMA										
101	Week-14	Definition	Define thoracic trauma and its common causes.	C1			Interactive Lecture/SGD	2	MCQS	4
102		Causes	Discuss Different types of thoracic trauma	C2						
103		Complication	Discuss the complications associated with thoracic trauma and their management.	C2						
104		Management of thoracic trauma	Identify the management strategies for specific thoracic injuries (e.g., pneumothorax, Hemothorax).	C3						
105		Treatment	Develop a treatment plan for a patient with penetrating thoracic trauma	C6						
106		Practical performances	Observe the intercostal chest tube insertion and secure it properly		P1		Demo	1	OSPE	1
107		Sop compliances	Acknowledge the potential for post-traumatic stress in thoracic trauma survivors.			A1	Role Play			
TOPIC: DIABETIC KETOACIDOSIS (DKA) AND MANAGEMENT										
108	Week-15	Definition	Define diabetic ketoacidosis (DKA) and its precipitating factors	C1			Interactive Lecture/SGD	2	MCQS	3
109		Clinical presentation	Describe the clinical presentation and diagnosis of DKA.	C2						
110		Pathophysiology	Explain its pathophysiology	C2						
111		Diabetic Ketoacidosis (DKA) and Management	Discuss the potential complications of DKA and their management.	C2						
112		Prevention	Formulate a strategy to prevent recurrent DKA in diabetic patients	C6						

113		SOP compliances	Demonstrate attentiveness in monitoring DKA patients' glucose levels.			A3	Role play	1	OSPE	1
TOPIC: COMMON DRUGS USED IN THE ICU										
114	Week-16	Drugs in the ICU	Enlist the most commonly used drugs in ICU settings.	C1			Interactive Lecture/SGD	2	MCQS	4
115		Pharmacokinetics	Explain the pharmacokinetics and pharmacodynamics of common drugs used in the ICU.	C2						
116		Common Drugs Used in the ICU	Describe the dosing and administration protocols of these drugs.	C2						
117		Side effect	Identify potential side effects of these drugs	C3						
118		Practical performances	Perform accurate calculations for drug dosages and infusion rates		P2		Demo	1	OSPE	2
119		Sop compliances	Recognize the critical importance of understanding drug indications, dosages, and side effects.			A1	Role play			

Recommended Books:

1. Oxford Handbook of Critical Care by Mervyn Singer, Andrew R. Webb
2. The Washington Manual of Critical Care, 3rd edition by Marin H. Kollof.
3. Marino's ICU book, 4th edition by Paul L. Marino, MD, PhD, FCCM.
4. Clinical anesthesiology. Morgan & Mikhail's, 5^{TH} edition.
5. Textbook of Anesthesia. Aitkenheads, Alan, R., 6^{TH} edition.

ASSESSMENT BREAKDOWN

S.No	Topics	No of MCQ	No of OSPE / OSCE Stations	Static / Interactive
1	Introduction to Critical Care	3	0	Static
2	Infection control in the ICU	3	1	Static and Interactive
3	Monitoring in the ICU	4	1	Interactive
4	Cardiopulmonary resuscitation (BLS, ACLS)	6	2	Interactive
5	Shock	5	1	Interactive
6	Mechanical Ventilation	7	2	Interactive
7	ABG's Interpretations	6	2	Interactive

8	Nutrition in the ICU	3	0	Interactive
9	Care of patients on a ventilator	4	0	Interactive
10	Fluids and Electrolytes balance	5	1	Interactive
11	Massive Blood Transfusion	4	1	Interactive
12	Sedation in the ICU	4	0	Interactive
13	Pain Management in the ICU	5	1	Interactive
14	Management of Thoracic Trauma	4	1	Interactive
15	Diabetic Ketoacidosis (DKA) and Management	3	0	Interactive
16	Common Drugs Used in the ICU	4	1	Interactive
Total	**16**	**70**	**14**	**14**

ANS-610 Leadership and Management 2(2+0)

Course Description

The purpose of this course is to equip students with essential knowledge and understanding of leadership and management principles in healthcare. It aims to develop professional competence by exploring leadership theories, emotional intelligence, communication, motivation, and resource management. Students will gain insight into planning, policymaking, organizational structures, and ethical leadership practices. Designed to integrate theoretical foundations with real-world applications, this course prepares learners to lead effectively and manage resources efficiently in diverse healthcare settings.

Learning Objectives

Cognitive Domain

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

1. Discuss the foundational concepts of leadership and management in healthcare.
2. Describe various leadership theories, including trait, behavioural, contingency, and transformational approaches, and their relevance to clinical practice.
3. Explain the core functions of management, such as planning, organizing, leading, and controlling, within the context of healthcare organizations.
4. Identify different organizational structures and managerial hierarchies, analysing their roles and interrelationships in healthcare delivery.
5. Discuss key concepts of emotional intelligence, motivation, communication, and professionalism as they apply to effective leadership.
6. Describe essential aspects of policymaking, financial management, and human resource practices in healthcare leadership and administration

Affective Domain

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

1. Demonstrate a positive attitude towards leadership responsibilities and teamwork.
2. Respect diverse perspectives and communicate professionally in group discussions and collaborative tasks.
3. Uphold ethical principles, accountability, and integrity in leadership and managerial roles within healthcare settings

TABLE OF SPECIFICATION

TOS-LEADERSHIP AND MANAGEMENT 2(2+0)

S.No	Weeks	Contents	Learning Outcome	Domain C	Domain P	Domain A	MIT's	Time/Hours	Assessment	No of Items
TOPIC: INTRODUCTION TO LEADERSHIP										
1	Week-1	Introduction	Define leadership	C1			Interactive lecture	2	MCQs/SEQs	4
2		Roles of leader	List of roles of a leader	C1						
3		Importance in healthcare	Describe importance in healthcare	C2						
4		Differences in contexts	Explain how leadership roles, styles, or effectiveness may change based on the environment	C2						
5		SOPs compliance	Demonstrate willingness to listen during leadership discussions.		A1		Role Play			
TOPIC: LEADERSHIP THEORIES										
6	Week-2	Key Theories	Identify key leadership theories	C1			Interactive lecture	2	MCQs/SEQs	3
7		Trait and Behavioral theories	Describe traits and behavioral theories	C2						
8		Contingency and transformational	Compare contingency vs transformational	C2						
9		Situational and charismatic theory	Explain the situational and charismatic theory of leadership	C2						
10		Great man theory	Explain the great man theory	C2						
11		SOPs compliance	Respond with interest to theoretical frameworks		A2		Role Play			
TOPIC: LEADERSHIP STYLES										
12	Week-3	Introduction	Define different leadership styles used in healthcare settings.	C1			Interactive lecture	2	MCQs/SEQs	3
13		Directive styles	Explain Directive Styles (Autocratic, Authoritative, Transactional, Bureaucratic)	C2						
14		Collaborative and supportive styles	Collaborative and Supportive Styles (Democratic, Laissez-faire, Transformational, Servant, Coaching)	C2						
15		Application of autocratic style	Describe the circumstances where an autocratic style would be effective (e.g., during a medical emergency, code blue).	C2						
16		SOPs compliance	Accept the value of diverse leadership styles and demonstrate openness to adapting one's own approach in collaborative healthcare settings		A3		Role Play			
TOPIC: PROFESSIONALISM IN LEADERSHIP										

17	Week-4	Definition	Define Professionalism and Ethics	C1		Interactive lecture	2	MCQs/SEQs	3
18		Key components	Recall key components of effective communication, teamwork, and conflict resolution	C1					
19		Importance of professionalism healthcare	Explain the importance of professionalism in maintaining patient trust and ensuring quality care	C2					
20		Conflict resolution	Apply conflict resolution skills to manage disagreements among team members	C4					
21		SOPs compliance	Willingly engage in respectful dialogue to resolve conflicts, valuing diverse perspectives and teamwork		A4	Role Play			
TOPIC: EMOTIONAL INTELLIGENCE									
22	Week-5	Definition & its Components	Define emotional intelligence and its key components	C1		Interactive lecture	2	MCQs/SEQs	4
23		Role in leadership	Explain the role of emotional intelligence in effective leadership.	C2					
24		Applying EI Strategies in Workplace Scenarios	Apply appropriate emotional intelligence strategies to manage common workplace scenarios such as conflict resolution, feedback response, motivation, and stress management	C3					
25		SOPs compliance	Accept responsibility in collaborative leadership tasks		A4	Role Play			
TOPIC: PROCESS MODELS AND CORE SKILLS									
26	Week-6	Introduction	Recall core leadership skills	C1		Interactive Lecture	2	MCQs	4
27		Leadership models	Explain Kouzes and Posner's Leadership Practices and Dunham and Pierce's Leadership Process Model	C2					
28		Decision making process	Illustrate decision-making processes	C2					
29		Team based task	Apply skills to team-based tasks	C2					
30		The 5 Es of Leadership	Explain the 5 Es of leadership	C2					
31		SOPs compliance	Advocate regular practice of intubation techniques to ensure competency.		A4	Role Play			
TOPIC: INTRODUCTION TO MANAGEMENT									
32	Week-7	Introduction	Discuss the 4 core functions of management	C2		Interactive Lecture	2	MCQs	7
33		Types of management	Discuss Macro and Micromanagement	C2					
34		Differences with leadership	Describe differences between leadership and management	C2					
35		Difference between leader and manager	Explain in detail the differences between manager and leader	C2					

36		SOPs compliance	Demonstrate curiosity about managerial roles		A2	Role Play			
TOPIC: MANAGERIAL HIERARCHY									
37	Week-8	Level of management	Enlist the levels of management	C1		Interactive Lecture	2	MCQs/SEQs	7
38		Responsibilities	Describe responsibilities of each level	C2					
39		Upward and downward communication	Explain upward and downward communication	C2					
40		Decision flow in hierarchy	Illustrate how decisions flow through different levels of the managerial hierarchy in healthcare setting	C3					
41		SOPs compliance	Show respect for the roles of all levels of management		A1	Role Play			
TOPIC: COMMUNICATION IN MANAGEMENT									
42	Week-9	Introduction	Recall the types of communication used in management	C1		Interactive Lecture/SGD	2	MCQs/SEQs	4
43		Communication models	Describe communication models in details	C2					
44		barriers to communication	Explain barriers to communication in healthcare management settings	C2					
45		Cultural differences influence	Explain how cultural differences influence communication styles in a diverse healthcare team	C2					
46		SOPs compliance	Participate actively in team discussions, demonstrating attentive listening and respectful engagement		A3	Role Play			
TOPIC: CONTROLLING IN MANAGEMENT									
47	Week-10	Definition	Define controlling	C1		Interactive Lecture/SGD	2	MCQs/SEQs	4
48		Span of control	Define span of control – how many people a manager can effectively supervise	C2					
49		Controlling tools	Describe common control tools and techniques used in management, such as Key Performance Indicators (KPIs), audits, budgets, and performance appraisals	C2					
50		Patient feedback as controlling tool	Describe how feedback from patients and staff can be used as a control tool to improve healthcare services	C2					
51		SOPs compliance	Recognize the importance of accountability and consistent monitoring in delivering safe and effective patient care		A3	Role Play			
TOPIC: HR MANAGEMENT									
52	Week-11	Definition	Define Human resources management	C1		Interactive Lecture	2	MCQs/SEQs	8
53		Function of HR	List down the functions and responsibilities of HR	C1					
54		Recruitment process	Discuss the recruitment and selection process in public and private sector	C2					
55		Handling	Explain grievance handling in healthcare management	C2					

		grievances							
56		SOPs compliance	Appreciate the role of HRM in team well-being.		A3	Role Play			
TOPIC: FINANCIAL MANAGEMENT									
57	Week-12	Introduction	Define financial management and financial terms used in healthcare, such as revenue, expenses, cost, and profit	C1		Interactive Lecture/SGD	2	MCQs/SEQs	5
58		Importance of financial management	Explain why financial management is important in ensuring quality patient care and sustainability of healthcare services	C2					
59		Decision making and financial management	Discuss how financial management supports decision-making in healthcare organizations	C2					
60		SOPs compliance	Demonstrate willingness to participate in discussions about the importance of financial responsibility in healthcare settings		A2	Role Play			
TOPIC: BUDGETING									
61	Week-13	Introduction	Define budgeting in the context of healthcare management.	C1		Interactive Lecture	2	MCQs/SEQs	3
62		Types	Define the types of budgets used in healthcare (e.g., operating, capital, cash, departmental)	C1					
63		Basic steps of the budgeting	Discuss the basic steps of the budgeting process	C2					
64		Purpose of budgeting	Explain the purpose of budgeting in healthcare organizations	C2					
65		Fixed and flexible budgets	Describe the differences between fixed and flexible budgets in a healthcare setting	C2					
66		SOPs compliance	Demonstrate willingness to engage in discussions on the role of budgeting in ensuring effective healthcare delivery		A2	Role Play			
TOPIC:PLANNING									
67	Week-14	Introduction	Define planning in the context of healthcare management and List types of planning	C1		Interactive Lecture/SGD	2	MCQs/SEQs	6
68		planning steps	Describe planning steps in details	C2					
69		strategic and operational planning	Explain the strategic and operational planning in a hospital setting	C2					
70		Influence on planning	Explain how external factors (e.g., government policy, epidemics, outbreaks and pandemics) influence healthcare planning	C2					
71		SOPs compliance	Participate actively in group activities and discussions related to healthcare planning scenarios		A4	Role Play			
TOPIC: MOTIVATION AND THEORIES									
72	Week-	Definition	Define motivation in the context of healthcare work environments and key terms	C1					

	15		such as intrinsic motivation, extrinsic motivation, job satisfaction, hygiene factors, and incentives			Interactive Lecture Demo	2	MCQs/SEQs OSPE	3
73		Maslow's Hierarchy of Needs	Explain Maslow's Hierarchy of Needs and how it applies to healthcare professionals	C2					
74		Herzberg's Two-Factor Theory	Describe Herzberg's Two-Factor Theory	C2					
75		Vroom's Expectancy	Discuss Vroom's Expectancy Theory and its implications for performance and reward systems in healthcare	C2					
76		SOPs compliance	Show interest in understanding what motivates oneself and others in clinical practice		A2	Role Play			
TOPIC: POLICY									
77	Week-16	Definition	Define policy in the context of healthcare systems.	C1		Interactive Lecture	2	MCQs/SEQs	3
78		Types of policies	Explain types of healthcare policies, such as institutional policies, government health policies, and clinical practice guidelines	C2					
79		Differences	Describe the difference between a policy, a procedure, and a protocol in simple terms	C2					
80		Health policies making	Discuss how health policies are made	C2					
81				C4					
82		MTI	Discuss how MTI reforms affect hospital staff, such as changes in hiring, promotions, and accountability	C2	A3	Role Play			

Recommended Books:

1. The art of medical leadership. Suzan Oran. Scott Conrad
2. Strategic management. Ritson, Neil
3. Management basics. Quinn, Susan,
4. Emotional intelligence. MTD training
5. On Becoming a Leader. Bennis, Warren, 4th edition.
6. How to Win Friends & Influence? Kouzes, M. James. & Posner, Z, Barry, 5th edition

ECT – 605 BURNS & TOXICOLOGY 3(2+1)

COURSE DESCRIPTION

This course provides an in-depth understanding of the pathophysiology, assessment, and management of burns and toxicological emergencies. It covers the classification of burns, fluid resuscitation, wound care, and complications associated with burn injuries. Additionally, the course explores various toxicological emergencies, including poisoning, overdose, and hazardous material exposure. Emphasis is placed on pre- hospital and hospital interventions, critical decision-making, and patient safety in burn and toxicology management.

LEARNING OBJECTIVES

Cognitive Domain

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

1. Explain the pathophysiology, classification, and severity of burn injuries.
2. Identify the principles of burn management, including fluid resuscitation, wound care, and pain control.
3. Describe common toxicological emergencies, their mechanisms of action, and clinical manifestations.
4. Discuss the principles of decontamination, antidote administration, and supportive care in toxicology cases.

Psychomotor Domain

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

1. Demonstrate empathy and compassion when managing burn and poisoning patients.
2. Exhibit professionalism and ethical decision-making in pre- hospital and hospital burn/toxicology cases.
3. Develop effective communication skills when educating patients and families on burn prevention and poison control

Affective Domain

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

1. Perform accurate assessment and triage of burn injuries based on severity and extent.
2. Demonstrate proper techniques for burn wound care, dressing application, and pain management.
3. Execute airway management and fluid resuscitation in critically burned patients.
4. Apply appropriate decontamination procedures for toxic exposures, including chemical and biological agents.
5. Administer antidotes and supportive treatments for specific poisoning cases, following established protocols.

TABLE OF SPECIFICATIONS

BURNS & TOXICOLOGY

S. No	week	Content	Learning Outcome	Domain			MIT'S	Time/ Hour	Assessment	No items
				C	P	A				
TOPIC: INTRODUCTION TO BURNS										
1.	Week-1	Introduction	Introduction to burns	C1			Interactive lecturer/ SGDs	2	MCQs	
2.		Causes	Enlist causes of burn injuries	C3						
3.		Pathophysiology	Explain pathophysiology of burn injuries	C3						
4.		Circulatory changes	Discuss the circulatory changes occurring due to burn injuries	C4						
5.		Mechanical block	Explain mechanical block occurring due to burn injuries	C3						
6.		Practical demonstration	Practical demonstration on Identification of different types of burns		P4			1	OSPE/ OSCE	
7.		comply to SOPS	comply to SOPS for the identification of various degree of burns			A4	Practical Demo			
TOPIC: IMMEDIATE CARE OF BURN PATIENTS										
8.	Week-2	Introduction	Introduction to the immediate care of burn patients	C1			Interactive lecturer/ SGDs	2	MCQs	
9.		Classification	Discuss the classification of immediate care into pre hospital and hospital care	C3						
10.		Recognition	Explain the recognition of a potentially burned airway	C3						
11.		Clinical features	Discuss the clinical features of inhalational injury	C3						
12.		Management	Explain the immediate management of an inhalational injury	C4						
13.		Video demonstration	Video demonstration on the utilization fire extinguisher and fire blankets in fire hazards		P4			1	OSPE/ OSCE	
14.		comply to SOPS	Comply to SOPs for utilization fire extinguisher and fire blankets			A4				
TOPIC: BURN CLASSIFICATION AND ASSESSMENT										
15.	Week-3	Introduction	Introduction to classification of burn injuries	C1			Interactive lecturer/ SGDs	2	MCQs	
16.		Types	Discuss the classification on basis of types	C3						
17.		Depth	Explain the classification on basis of depth of burn injuries	C3						
18.		Electric burns	Explain the mechanism of burn injuries due to electrical burns	C3						
19.		Chemical burns	Explain the mechanism of burn injuries due to chemical burns	C3						

20.		Assessment	Explain the assessment of burn injury size through palm method and Rule of 9	C3						
21.		Practical demonstration	Practical demonstration on the application of rule of nine for assessment of total body surface area Burn		P4			1	OSPE/ OSCE	
22.		comply to SOPS	Comply to SOPs for the application of rule of nine for assessment of total Body Surface area burn independently			A4				
TOPIC: FLUID RESUSSCITATION AND ENERGY BALANCE IN BURN PATIENTS										
23.	Week-4	Introduction	Introduction of different types of fluids that can be given to burn patients	C1			Interactive lecturer/ SGDs	2	MCQs	
24.		Principle	Explain the principles for fluid resuscitation	C3						
25.		Indications	Discuss the indications for fluid resuscitation	C2						
26.		Parkland formula	Explain the parkland formula for crystalloid resuscitation	C3						
27.		Muir and Barcley formula	Explain Muir and Barcley formula for colloid resuscitation	C4						
28.		Monitoring	Discuss the monitoring of fluid resuscitation	C3						
29.		Definition	Define energy balance	C1						
30.		Assessment	Explain the assessment of energy requirement	C2						
31.		Objectives	Discuss the objectives of nutritional management	C3						
32.		Goals	Explain the goals of nutritional management	C3						
33.		Curreri formula	Explain Curreri formula for daily caloric requirement of burn patients	C3						
34.		Devies formula	Explain Devies formula for daily caloric requirement of burn patients	C3						
35.		Practical performance	Video demonstration on escharotomy in patients with circumferential full thickness burns		P4		Practical Demo	1	OSPE/ OSCE	
36.		Comply to SOP	Comply to SOPs for escharotomy			A4				
TOPIC: TREATING THE BURN WOUND										
37.	Week-5	Introduction	Introduction to treatment options of burns	C1			Interactive lecturer/ SGDs	2	MCQs	
38.		Escharotomy	Discuss escharotomy procedure	C4						
39.		Key features	Explain key features for escharotomy placement	C3						
40.		Dressing	Explain the types of dressings used for burn wounds	C3						
41.		Contaminated burn wound	Discuss the management of contaminated burn wound	C4						
42.		Additional aspects	Describe the additional aspects of treating the burn patient	C4						
43.		Practical performance	Practical/Video demonstration on various pharmacological dressings in burn		P4			1	OSPE/ OSCE	
44.		Comply to SOP	Comply to sops for pharmacological dressings in burn			A4				

TOPIC: SURGERY FOR THE ACUTE BURN WOUND										
45.	Week-6	Indications	Discuss the indications for surgery of burn wounds	C1			Interactive lecturer/ SGDs	2	MCQs	
46.		Indications	Discuss the criteria for surgical treatment of burn wounds	C3						
47.		Deep burn wounds	Explain the surgery for deep burn wounds	C4						
48.		Cosmetic surgeries	Explain Z-plasty ,free flaps and tissue expansion	C3						
49.		Hypertrophic scars	Explain the use pressure garments for hypertrophic scars	C3						
50.		Practical performance	Video demonstration on dressing and debridement in full thickness burns		P4			1	OSPE/ OSCE	
51.		Comply to SOP	Comply to SOPs for dressing and debridement			A4	Practical Demo			
TOPIC: NON THERMAL BURN INJURIES										
52.	Week-7	Definition	Define non thermal burn injuries	C1			Interactive lecturer/ SGDs	2	MCQs	
53.		Electric Injuries	Explain electrical injuries	C2						
54.		High tension Electric burns	Explain the classification of high tension electric burns	C3						
55.		Low tension Electric burns	Explain the classification of low tension electric burns	C3						
56.		Chemical burns	Explain chemical injuries	C3						
57.		Classification	Discuss the classification of chemical injuries	C4						
58.		Management	Explain the management of non-thermal burn injuries	C3						
59.		Ionizing radiation injury	Explain the types and management of ionizing radiation injury	C4						
60.		Practical performance	Practical/Video demonstration on ECG monitoring in electrical burns		P4		Demonstration	1	OSPE/ OSCE	
61.		Comply to SOP	Comply to SOPs for ECG monitoring			A4				
TOPIC: INTRODUCTION TO TOXICOLOGY										
62.	Week-8	Introduction	Introduction of toxicology	C1			Interactive lecturer/ SGDs	2	MCQs	
63.		Routes of poisoning	Discuss different routes of poisoning	C3						
64.		Causes	Explain the causes of drug overdose	C3						
65.		Investigation	Discuss the investigations performed for patients with poisoning	C4						
66.		Differential diagnosis	Explain the differential diagnosis related to poisoning	C3						
67.		Management	Explain the general and immediate management of cases with poisoning	C4						
68.		Practical performance	Video demonstration on identification and differentiation of common toxidromes		P4			1	OSPE/ OSCE	
69.		Ethical considerations	Maintain ethical considerations while assessing toxidromes			A4				
TOPIC: INTRODUCTION TO TOXICOLOGY										
70.	Week-9	Decontamination	Explain different procedures used for decontamination	C4			Interactive	2	MCQs	

71.		Management	Discuss the management of patients with special case	C3			lecturer/ SGDs			
72.		Antidotes	Discuss the antidotes specific to poisons	C3						
73.		Legal pitfalls	Discuss legal pitfalls of patients with poisoning	C2						
74.		Practical performance	Practical demonstration on gastric decompression in patients with acute poisoning		P4			1	OSPE/ OSCE	
75.		Informed consent	Obtain informed consent before gastric decompression			A4				
TOPIC: ORGANOPHOSPHATE POISONING										
76.	Week-10	Definition	Define organophosphates	C1			Interactive lecturer/ SGDs	2	MCQs	
77.		Mechanism	Explain the mechanism of toxicity of organophosphates	C3						
78.		Modes	Discuss modes of toxicity	C2						
79.		Clinical features	Explain the clinical features of patients with organophosphate poisoning	C3						
80.		Presentation and assessment	Discuss the presentation and assessment of patients with organophosphate poisoning	C3						
81.		Investigations	Discuss the investigations performed for patient with organophosphate poisoning	C4						
82.		diagnosis	Discuss the diagnosis of patient with organophosphate poisoning	C3						
83.		Management	Explain the management of patients with organophosphate poisoning	C4						
84.		Practical performance	Practical demonstration on the application activated charcoal in acute poisoning		P4		Demonstration	1	OSPE/ OSCE	
85.		Comply to SOP	Comply to SOPs for application activated charcoal in acute poisoning independently			A4				
TOPIC: ANTICONVULSANTS DRUGS TOXICITY										
86.	Week-11	Definition	Define Anticonvulsants	C1			Interactive lecturer/ SGDs	2	MCQs	
87.		Mechanism	Explain the mechanism of action of anticonvulsants	C3						
88.		Etiology	Discuss the etiology of anticonvulsants overdose	C3						
89.		Pathophysiology	Explain the pathophysiology of anticonvulsants toxicity	C3						
90.		diagnosis	Discuss the laboratory diagnosis of anticonvulsants toxicity	C4						
91.		Management	Explain the management of patients with anticonvulsants toxicity	C3						
92.		Practical performance	Identification of specific antidotes for various poisoning		P4			1	OSPE/ OSCE	
93.		comply to SOP	Comply to SOPs for identification of antidotes independently			A4				
TOPIC: BETA BLOCKER AND CALCIUM CHANNEL BLOCKER TOXICITY										

94.	Week-12	Definition	Define Beta blocker and Calcium channel blockers	C1			Interactive lecturer/ SGDs	2	MCQs	
95.		Mechanism	Explain the mechanism of action of beta blockers and calcium channel blockers	C3						
96.		etiology	Discuss the etiology of beta blockers and calcium channel blockers	C2						
97.		Presentation and assessment	Discuss Presentation and assessment of patients with beta blockers and calcium channel blockers	C3						
98.		pathophysiology	Explain the pathophysiology of beta blockers and calcium channel blockers	C3						
99.		laboratory diagnosis	Discuss the laboratory diagnosis of beta blockers and calcium channel blockers overdose	C4						
100		Management	Explain the management of patients with beta blockers and calcium channel blockers overdose	C4						
101		Practical performance	Practical demonstration on preparation of first aid kit for poisoning patients		P4			1	OSPE/ OSCE	
102		comply to SOP	Comply to SOPs for preparation of first aid kit for poisoning patients independently			A4	Roll Play			
TOPIC: BENZODIAZEPINES TOXICITY										
103	Week-13	Definition	Define Benzodiazepines	C1			Interactive lecturer/ SGDs	2	MCQs	
104		Mechanism	Discuss the mechanism of action of benzodiazepines	C2						
105		Etiology	Discuss the etiology of benzodiazepines overdose	C3						
106		Pathophysiology	Explain the pathophysiology of benzodiazepines toxicity	C3						
107		Presentation and assessment	Discuss Presentation and assessment of patients with benzodiazepines toxicity	C3						
108		laboratory diagnosis	Discuss the laboratory diagnosis of benzodiazepine toxicity	C4						
109		Management	Explain the management of patients with benzodiazepines toxicity	C4						
110		Practical performance	Practical demonstration on application of urinary catheterization		P4		Demonstration	1	OSPE/ OSCE	
111		Comply to SOPS	Comply to SOPs for application of urinary catheterization independently			A4	Roll Play			
TOPIC: ASPIRIN TOXICITY										
112	Week-14	Definition	Define Aspirin	C1			Interactive lecturer/ SGDs	2	MCQs	
113		Mechanism	Discuss the mechanism of action of aspirin	C3						
114		Etiology	Discuss the etiology of aspirin overdose	C3						
115		Pathophysiology	Explain the pathophysiology of aspirin toxicity	C4						
116		Presentation and assessment	Discuss Presentation and assessment of patients with aspirin toxicity	C3						

117		laboratory diagnosis	Discuss the laboratory diagnosis of aspirin toxicity	C3						
118		Management	Explain the management of patients with aspirin toxicity	C4						
119		Practical performance	Practical demonstration of application of NG tube independently		P4		Demonstration	1	OSPE/ OSCE	
120		Comply to SOPs	Comply to SOPs for application of NG tube effectively			A4				
TOPIC: NSAIDS AND ALCOHOL TOXICITY										
121	Week-15	Introduction	Give introduction about NSAIDs and alcohol	C1			Interactive lecturer/ SGDs	2	MCQs	
122		Mechanism	Discuss the mechanism of action of NSAIDs and alcohol	C3						
123		Etiology	Discuss the etiology of NSAIDs overdose	C3						
124		Pathophysiology	Explain the pathophysiology of NSAIDs and alcohol toxicity	C4						
125		Presentation and assessment	Discuss Presentation and assessment of patients with NSAIDs and alcohol toxicity	C3						
126		laboratory diagnosis	Discuss the laboratory diagnosis of NSAIDs and alcohol toxicity	C3						
127		Management	Explain the management of patients with NSAIDs and alcohol toxicity	C4						
128		Practical performance	Practical demonstration on application of endotracheal tube for metabolic poisoning independently		P4			1	OSPE/ OSCE	
129		Comply to SOPs	Comply to SOPs for application of endotracheal tube for metabolic poisoning effectively			A4				
TOPIC: MANAGEMENT OF SNAKE AND SCORPION BITE										
130	Week-16	Introduction	Give introduction about snake and scorpion bite	C1			Interactive lecturer/ SGDs	2	MCQs	
131		Sign and symptoms	Discuss the sign and symptoms of snake and scorpion bite	C3						
132		Types	Discuss the types of snake venom	C3						
133		Toxic effect	Explain the toxic effect of snake and scorpion bite	C4						
134		Diagnosis	Discuss the lab diagnosis of snake and scorpion bite	C3						
135		Management	Explain the management for snake and scorpion bite	C3						
136		Practical performance	Practical demonstration on assessment of urine output for monitoring toxicity in Poisoning Patients independently		P4		Demonstration	1	OSPE/ OSCE	
137		Comply to SOPs	Comply to SOPs for assessment of urine output for monitoring toxicity in Poisoning Patients effectively			A4				

Recommended Books

1. Baily & Love Short Practice of Surgery
2. ABC of Burns
3. Emergencies in critical care
4. ABC of Emergency Medicines
5. First Aid for the Emergency Medicines Board

ASSESSMENT BREAKDOWN				
S.No	**Topics**	**No of MCQ**	**No of OSPE / OSCE Stations**	**Static / Interactive**
1	Introduction to burns	5	1	Static
2	Immediate care of burn patients	2	1	Static and Interactive
3	Burn classification and assessment	7	1	Interactive
4	Fluid resuscitation in burn patients	4	1	Static
5	Energy balance in burn patients	3	1	Interactive
6	Treating the burn wound	3	1	Static
7	Surgery for the acute burn wound	4	1	Static
8	Non thermal burn injuries	6	1	Static
9	Introduction to toxicology	9	1	Static
10	Organophosphate poisoning	5	1	Static
11	Anticonvulsants drugs toxicity	4	1	Static/ Interactive
12	Beta blocker and calcium channel blocker toxicity	5	1	Interactive
13	Benzodiazepines toxicity	3	-	-
14	Aspirin toxicity	3	-	-
15	Nsaids and alcohol toxicity	5	1	Interactive
16	Management of snake and scorpion bite	2	1	Static
Total	**16**	**70**	**14**	**14**

THE END