وصف المقررات – بكالوريوس الخدمات الطبية الطارئة

	Course Name	Course Description
1	Pathophysiology for EMS	This course mainly focused on general pathology, covering up basic pathological process at cellular level. It also covers basic knowledge of immunity and response to infection. Process of inflammation, viral/bacterial/parasitic infection and its pathological process. Also, emphasis is given in the identifications and management of different types of shock. They must understand types and management of hypersensitivity reactions. Basic knowledge of genetics and relevant mutations. Good knowledge on basics of physiology and anatomy is required to study this course for a proper understanding of pathology.
2	Fundamentals of EMS	This course is designed to prepare the Emergency Medical Services student for understanding the basic concepts that are in operation to deliver successful Emergency Medical Services. Various aspects of the wellbeing of a paramedic including disease transmission, standard precautions, stress, and its management and lifespan development will be covered. The course also describes ambulance standards, phases of ambulance call in regular and special situations, ambulance communication, rescue operations, and medical incident command.
3	Medical Microbiology	By the end of the course the students are expected to demonstrate the ability to assimilate and integrate information from lectures, practical sessions, tutorials, and independent activities on medical microbiology. The student demonstrates the ability to gain practical skills enabling him to recognize and manipulate the causes of infection. By the end of this course module, the student will demonstrate the ability to apply his basic knowledge and cognitive skills to solve problems and understand some related areas beyond the medical microbiology course and appreciate the major supporting evidence based on textbook reviews and electronic learning materials. In addition, students will have the experience to learn fast through group discussion/presentation and how to communicate with other students and teaching staff.
4	Introduction to Human Anatomy	By the end of this course the students will demonstrate the ability to assimilate and integrate information from lectures, practical sessions, tutorial, and independent activities on the introduction to anatomy. Student will demonstrate the ability to gain practical skills enabling him to recognize and differentiate the levels of the human systems of the body. The student will demonstrate the ability to apply his basic knowledge and cognitive skills to solve problems and understand some related areas beyond the Anatomy course and appreciate the major supporting evidence based on text-books reviews and electronic learning materials.

		Also, students will have the experience through small group teaching and group discussion to analyse the anatomical basics, related to different body systems and to communicate with other students and teaching staff.
6	Basic Pharmacology	This course is designed to give an overview of drugs and provide the students with the skills, knowledge, and background necessary to be a professional healthcare provider in dealing with drug use.
7	Clinical Practice 1	This course helps the students about how to Scene size-up, management of airway, Intubation, other Invasive & non-invasive methods of Airway management. This course also demonstrate assessment, Physical examination and Basic Life support.
8	Fundamentals of Epidemiology	Introduction to epidemiology for students majoring in any aspect of public health; covers the principles and methods of epidemiologic investigation including describing the patterns of illness in populations and research designs for investigating the etiology of disease. Introduces quantitative measures to determine risk, association, and procedures for standardization of rates.
9	EMS Communication & Documentation	This course is designed to prepare the Emergency Medical Services student for, to identify the importance of communication when providing Emergency medical care, and to be able to effectively document the essential elements of patient assessment, care, and transport.
10	Trauma Emergencies I	This course focuses on the identification of the role of each component of the trauma system, the Identification and application of the Golden Principles of Pre-hospital Trauma Care, and appropriate pre-hospital assessment and management of airway and ventilation problems and shock.
11	Medical Emergencies 1	This course reviews anatomy and physiology as well as patient assessment of the neurologic, endocrine, immunologic, gastrointestinal and genitourinary systems. Further, it focuses on the epidemiology, pathophysiology, assessment and management of the life-threatening emergencies of the aforementioned systems. The training will enable the learner to assess and identify the emergency, appreciate the nature of the presenting emergency, value the urgency in interventions and master the appropriate skills to manage the emergency safely and effectively.
12	Trauma Emergencies 2	This course provides the foundational knowledge and skills to manage prehospital traumatic emergencies related to various body systems (single system or polytrauma). The aim of this course is to promote excellence in trauma patient management by all providers involved in the delivery of prehospital care. The course is based on a prehospital trauma care philosophy, stressing the treatment of the multi-system trauma patient as a unique entity with specific needs.

13	Clinical Practice 2	Students will apply the theoretical and practical content of previous courses through participation and or observation of patient care in hospital and pre-hospital settings. Students will be posted in emergency & recovery rooms during hospital experience.
14	Emergency Patient Assessment	This course provides the knowledge and skills needed to perform a comprehensive trauma patient assessment, make initial management decisions, and to communicate assessment findings and patient care verbally and in writing. This course also is designed to teach the students the skills necessary for systematically assessing medical emergencies by utilizing the equipment in the ambulance. The student in this course will also be able to communicate with the patient to elicit the medically appropriate signs of his/her illness to decide the appropriate action necessary to treat the identified emergency.
15	Obstestrics-Gynecological Emergencies	This course reviews the anatomy and physiology of female reproductive system and proceeds to address the process of fertilization, fetal development and physiological changes during pregnancy, labor and puerperium. This course focuses on the epidemiology, pathophysiology, assessment and management of obstetric and gynecologic emergencies in the prehospital setting. The learners will be trained to identify normal and abnormal pregnancy, labor and puerperium, and intervene to safeguard the maternal and fetus/newborn's health in compliance with standards of care.
16	Airway Management & Ventilation	The Airway Management & Ventilation course for paramedics provides comprehensive training in essential skills and techniques necessary for maintaining and managing airways and ventilation in emergency medical situations. This course is designed to equip paramedics with the knowledge, proficiency, and confidence to effectively assess, establish, and manage airways, ensuring optimal oxygenation and ventilation for patients across various emergency scenarios. Emphasis is placed on critical thinking, decision-making, and the ability to adapt techniques to individual patient needs and clinical contexts.
17	Medical Emergencies 2	This course reviews anatomy and physiology of hematologic system. Further, it focuses on the epidemiology, pathophysiology, assessment and management of Toxicological, Hematological, Environmental, Infectious and Communicable Disease emergencies. The training will enable the learner to assess and identify the emergency, appreciate the nature of the presenting emergency, value the urgency in interventions and master the appropriate skills to manage the emergency safely and effectively.
18	Pharmacology in EMS	This course designed to integrates comprehensive knowledge of pharmacology to formulate a treatment plan intended to mitigate emergencies and improve the overall health of the patient.

19	Cardiac Emergencies	This course integrates assessment findings with principles of epidemiology and pathophysiology to formulate a field impression and implement a comprehensive treatment or disposition plan for a patient with a medical complaint about the cardiovascular system. The students will be able to exercise sufficient judgment and accept responsibility in therapeutic procedures based on observation of patients including findings of diagnostic procedures and integrate knowledge of anatomy, physiology, pathophysiology, and pharmacology.
20	Clinical Practice 3	The student will practice in the hospital setting all skills to perform various emergency procedures in prehospital settings. At the end of this course, EMS specialists can perform emergency procedures such as an ECG, how to record an ECG, Cardiopulmonary resuscitation, Defibrillation, Synchronized Cardioversion, and Transcutaneous pacing. Thoracic tube insertion, Central vein placement, management of burns, neurological, cardiovascular, and gastrointestinal emergencies.
21	Community Paramedicine	This course integrates comprehensive knowledge of the EMS system and applies fundamental knowledge of principles of public health and epidemiology including public health emergencies, health promotion, and illness and injury prevention. This course also gives basic knowledge of communication and community paramedicine.
22	Pediatric Emergencies	Integrates assessment findings with principles of pathophysiology and knowledge of psychosocial needs to formulate a field impression to implement a comprehensive treatment/disposition plan for Pediatric patients with special needs, pediatric-specific major or common diseases, and/or emergencies.
23	Critical Care	This course is designed to prepare the Emergency Medical Services student for understanding the concepts of critical care, critical care transportation and comprehensive assessment and management of critically ill patients with medical or traumatic conditions inclusive of airway management, ventilation, diagnostic evaluation, pharmacology, sepsis and MODS. The course also introduces students to flight physiology and aircraft fundamentals.
24	Infectious Diseases	Introduction of epidemiological aspects of infectious disease and principles related to infectious disease. Pathophysiology of infections and human response to infection. Introduction of common infections of viral, and bacterial diseases. Reporting system of communicable diseases. Paramedic role in the prevention of disease transmission.
25	Psychological & Mental Health Disorders	The course provides the basic knowledge for the prehospital care of psychiatric patients and their emergencies, and the promotion and maintenance of mental health of people. It equips the paramedics for pre-hospital care of psychiatric diseases like depression, addiction, schizophrenia, and other organic disorders. The course also provides insight into behavioral

		emergencies like delirium, acute psychosis, and suicidal attempts.
26	Disaster & Emergency Management	The course introduces students to disaster risk management by providing insight into disaster terminologies and concepts, the spatial distribution of disasters, the classification of disasters, the causes of disasters, and the effects of disasters on social and economic development. The course then delves into the use of early alert system, philosophy and principles of disaster risk management, and explains the major components of the disaster risk management cycle and how these components can be integrated across all levels of governance to address issues of disaster risk reduction.
27	Research Methodology	This course will introduce the basics of research methods, types of research and its concepts: how to formulate a good research problem, steps to be followed to make a good research problem, selecting the appropriate study designs, formulation of research tool and methods of data collection, types of variables: and interpretation of data. This course advances the student's understanding of selected research methods and conducts research programs. The student will be able to critically read and assess scientific texts and apply this knowledge in developing research proposals. An adequate research skill to improve the quality of work and evidence-based practice . Students work in small groups to develop a proposal for a research project relevant to public health practice.
28	Special Considerations	After completion of this course, the students for performing comprehensive assessments and pre-hospital management of geriatric patients. The course focuses on the pathophysiology of aging, assessment, and management of the elderly with medical, psychosocial, and trauma emergencies. The students would also be able to describe and demonstrate safe, empathetic competence in caring for patients with special challenges and patients requiring home care and home care interventions.
29	Research Project	This course familiarizes the students with basic research principles and steps necessary for doing research. It also provides the students with the necessary knowledge related to research types and the different approaches in research. It emphasizes the importance of doing research and the significance of research in the EMS system. It emphasizes the paramedics adopting an evidence-based practice (EBP) that incorporates research findings into their decisions and their interactions with patients.
30	Clinical Decision Making in EMS	This course is designed to prepare the Emergency Medical Services student to integrate theoretical and practical/ clinical concepts about professional issues, safety, quality, critical thinking, and reasoning, formulating a clinical impression, clinical decision-making based on best evidence, and implementation of the plan of care for patients in emergencies along the lifespan, across various settings. The student incorporates previous knowledge and skills in patient

		assessment, management, decision-making, communication, and interpersonal relationships to ensure safe and quality care for patients with medical and traumatic emergencies.
31	Clinical Practice 4	The student will practice in various specialty units of the hospital setting all skills related to Emergency Medical services including all skills mastered in Clinical Practicum 1 &2 & 3.
32	Leadership And Quality Management in EMS	The main purpose of this course are to develop skills of strategic planning, and leadership qualities, knowledge and Skills in Management of Education, Human Resources, Financial, Fleet, EMS Quality management, and Communication centers, and how to maintain legal and labor relations, Interagency relations, and operations.