



**Jordan University of Science and Technology**  
**Faculty of Applied Medical Sciences**  
**Department of Allied Medical Sciences**

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**Study Plan of Bachelor Degree in Paramedic**

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**Vision:**

The vision of the department is to lead, through academic and research excellence, regional and national health care delivery in the field of radiological sciences, optometry and paramedic.

**Mission:**

Consistent with the mission of J.U.S.T. our mission is to be a premier in improving paramedic through graduating fully qualified graduates to fulfill the need in the community and the region.

**Objectives:**

1. To provide students with the required knowledge related to emergency medical services.
2. To provide students with required human simulated training.
3. To provide student the required training related to emergency medical services in hospitals and paramedic training in the field.
4. To introduce the student to the ethics and regulations of the paramedic career, and train the students on providing professional patient care.

**Job opportunities:** the department of Allied Medical Sciences prepares the graduates in the paramedic program to work in the following fields:

1. Emergency departments of governmental, private and Royal Medical Services hospitals.
2. Jordanian Civil Defense or other equivalent systems in other countries (example: Red Cross).
3. Sport centers, airports, factors and other sectors where staffs are normally exposed to trauma during their work.

Study Plan of Bachelor degree in Radiologic Technology

Numbering and coding system of courses of the study plan.

Course Coding

The following codes are used to designate courses:

Department				Level/year	Field	Sequence
A	B	C	D	x	y	z

The Department codes are as follows:

Code	Department	Code	Department
PARA	Paramedic	AS	Audiology and Speech Therapy
PT	Physical Therapy	RA	Radiologic Technology
OT	Occupational Therapy	ADS	Allied Dental Sciences
OPT	Optometry	LM	Medical Laboratory Sciences
TDEN	Dental Technology		

Course Numbering

- The paramedic courses are tabulated and numbered in such a manner to recognize each course regarding its subject area, year or level, and semester offered.
- Ex. PARA xyz: The **PARA** symbol in the course number denotes paramedic and (xyz) is a 3-digits number:

A. The first digit denotes the year level of the course according to student’s study plan as follows:

<b>Code</b>	<b>Level/year</b>
1	First
2	Second
3	Third
4	Fourth

B. The second digit denotes the course field subject as follows:

<b>Number</b>	<b>Specialization</b>
0	Introductory and basic paramedic
1	Cardiopulmonary emergencies
2	First aids and trauma
3	Advanced and specialized emergency services
4	Emergency and medical cases
5	Disaster and emergency services management
6	Maternity and pediatric emergencies
7	Clinical or Field training
8	Emergencies of special and critical cases
9	Allied medical sciences courses

C. The third digit denotes sequence of semester during which the course is offered according to the study plan. In a way that odd numbers are given to the first and summer semesters while even numbers are given to second semesters. Example: PARA 104 Introduction to paramedic means:

PARA	1	0	4
Paramedic	First year	Introductory and basic paramedic	Second semester

A Bachelor of Science (B.Sc.) degree in Paramedic at JUST is awarded in accordance with the statute stated by JUST regulations for B.Sc. awarding issued by the Dean’s Council based on the adjusted 1987 law for awarding scientific degrees and certifications at JUST after completing (137) credit hours successfully.

The study plan composed of the following:

Classification	Credit hours		
	Compulsory	Elective	TOTAL
University requirements	12	15	27
Faculty requirements	21	-	21
Department requirements	89	-	89
<b>TOTAL</b>	<b>122</b>	<b>15</b>	<b>137</b>

**A. University Requirements (27 Credit Hours)**

**1. Compulsory University Courses (12 Credit Hours) as below:**

Course No.	Course title	Credit hours	Theoretical	Practical
ARB 101	Arabic language	3	3	-
HSS 119	Entrepreneurship and innovation	2	2	-
LG 112(**)	English language 2	3	3	-
HSS 110	Social Responsibility	3	2	1
MS 100 (*)	Military sciences	3	3	-
HSS 129	General Skills	2	2	LG 112

\* The course is compulsory for Jordanian students only and is considered on a pass/ fail basis. Non-Jordanian students have to register for an alternative course selected from the list of university elective courses; grades for this course will be considered in the overall accumulative average of the student. In accordance with Higher Education Council’s resolution 1561 dated 22.6.1998,

students who have graduated from military institutions are exempted from this course. The exemption includes the following categories:

- Graduates of The Royal Military College, Mu'tah University – and similar international military institutions.
- Officers who have taken basic courses in military operations
- Students who have obtained a statement from the Directorate of Military Training verifying that the student is eligible for exemption.

\*\* Pre-requisite: passing LG 099 or passing English Language Placement Test with a grade > 50%.

**NOTICE:** Non-Arabic speaking students must register for the following Arabic language course:

Course No.	Course title	Credit hours	Theoretical	Practical
ARB 101A	Fundamentals of Arabic language (for non-Arabic speaking students) as a substitute for the course ARB101 Arabic language)	3	3	-

2. **Elective courses:** (9) Credit hours selected by the students from the following list:

	Course No.	Course title	Credit hours	Theoretical	Lab
<b>Group One: Humanities</b>					
1.	ARB 200	Appreciation of literary texts	3	3	-
2.	HSS 103	The Palestinian issue	3	3	-
3.	HSS 115	Islam and recent problems	3	3	-
4.	HSS 116	Economic system in Islam	3	3	-
5.	HSS 121	Principles of sociology	3	3	-



6.	HSS 126	Principles of psychology	3	3	-
7.	HSS 127	Educational technology	3	3	-
8.	HSS 131	Islamic civilization	3	3	-
9.	HSS 132	The history of the city of Jerusalem	3	3	-
10.	HSS 133	Civilization and recent cultures	3	3	-
11.	HSS 135	Islamic culture	3	3	-
12.	HSS 137	Human rights	3	3	-
13.	HSS 153	Islam and contemporary challenges	3	3	-
14.	HSS 161	Contemporary problems	3	3	-
15.	HSS 211	Sociology (in English)	3	3	-
16.	HSS 213	Individual and society	3	3	-
17.	HSS 221	Introduction to psychology (in English)	3	3	-
18.	HSS 231	History of science in Islam	3	3	-
19.	HSS 251	Music tasting	3	3	-
20.	LG 106	Basic German language	3	3	-
<b>Group two: Scientific and Agricultural</b>					
21.	ES 103	Environnement protection (for non environnement sciences students)	3	3	-
22.	ME 102	Introduction to renewable energy	3	3	-
23.	ME 211	Fundamentals of automobile engineering (for non-ME students)	3	3	-
24.	CHE 191	Introduction to the Nanotechnology	3	3	-

25.	NF 177	Food preservation (in English)	3	3	-
26.	AP 200	Farm animal products (for non-agriculture and veterinary students)	3	3	-
27.	PP 200	Home gardens (for non-plant production and soil and irrigation students)	3	3	-
28.	PP 201	Beekeeping (for non-plant production students)	3	3	-
29.	NR 200	Natural resources and human (for non-plant production and soil and irrigation students)	3	3	-
30.	NR 207	Plant earth problems & solutions (for non-agriculture students)	3	3	-
31.	NE 200	Principles in nuclear energy and its peaceful applications	3	3	-
<b>Group Three: Health</b>					
32.	NUR 100	Health promotion (for non-medicine, non-nursing, and non-midwifery students)	3	3	-
33.	ADS 100	Oral and dental health (for non-dentistry and non-dentistry sciences students)	3	3	-
34.	PH 104	Community health and nutrition (for non-medicine, non-nursing, and non-midwifery students)	3	3	-
35.	NUR 109	Family health (for non-medicine, non-nursing, and non-midwifery students)	3	3	-
36.	VM 211	Animal health (not for veterinary medical and agriculture students)	3	3	-
37.	VM 212	Pet animal care (not for veterinary medical students)	3	3	-
38.	VM 213	Animal behavior and welfare	3	3	-
39.	PT 100	Wellness and life styles (for non-physical and occupational therapy students)	3	3	-
40.	OT 100	Disability and the society(not allowed for rehabilitation science dep. students)	3	3	-

\* Students are advised to enroll in HSS 221 Principles of psychology

**B. Faculty Requirements: (24 credit hours)** distributed as follows:

Course No.	Course title	Credit hours	Theoretical	Lab	Prerequisite or co-request
ADS 491	Administration and quality assurance in applied medical sciences	3	3	-	--
BT 103	General biology	3	3	-	--
BT107	General biology lab	1	-	1	BT 103 (or co)
CHEM 103	General chemistry	3	3	-	--
CHEM107	General chemistry lab	1	-	1	CEM 103 (or co)
PT 218	Gross anatomy and histology	3	2	1	BT 103, BT 107
MED 230A	Human physiology	3	3	-	BT 103
MED 230B	Human physiology lab	1	-	1	MED 230A (or co)
PH 311	Biostatistics	2	2	-	--
LM 491	Scientific research methods	1	1	-	PH 311
LM 493	Research project	2	2	-	LM 491
PARA 391	Ethics in applied medical careers	1	1	-	--
<b>TOTAL</b>		<b>24</b>	<b>20</b>	<b>4</b>	

**C. Department requirements: (88 Credit Hours) distributed as follows:**

**1. Department required courses from the Faculty of Science and Arts (7 credit hours); distributed as follows:**

Course No.	Course title	Credit hours	Theoretical	Lab	Prerequisite (or Co)
BT 231	General Microbiology	3	3	-	BT 103
BT 233	General Microbiology lab	1	-	1	BT 231 or Co-requisite
CHEM 262	Biochemistry	3	3	-	BT 103, CHEM 103
<b>TOTAL</b>		<b>7</b>	<b>6</b>	<b>1</b>	

**2. Department required courses from the Faculty of Medicine (3 credit hours); distributed as follows**

Course No.	Course title	Credit hours	Theoretical	Lab	Prerequisite (or Co)
MED 255	Pharmacology	3	3	-	BT 233 , MED 230B
<b>TOTAL</b>		<b>3</b>	<b>3</b>	<b>-</b>	

3. Department required courses from the department of Allied Medical Sciences (78 credit hours); distributed as follows:

Course No.	Course title	Credit hours	Theoretical	Lab	Prerequisite	Co-requisite
PARA104	Introduction to paramedic	2	2	-	--	--
PARA 106	Introduction to paramedic lab	1	-	1	--	PARA 104
PARA 200	Growth and development for paramedic students	2	2	-	PT 218	--
PARA 208	Psychology and sociology for paramedic students	3	3	-	--	--
PARA 202	Health assessment	3	3	-	PT 218, MED 230A, MED 230B	--
PARA 204	Health assessment lab	1	-	1	PT 218, MED 230A, MED 230B	PARA 202
PARA 226	Basic management of trauma emergencies	3	3	-	PARA 106, MED 230A, MED 230B	--
PARA 228	Basic management of trauma emergencies lab	1	-	1	--	PARA 226
PARA 223	Basic management of medical emergencies	3	3	-	PARA 106, MED 230A, MED 230B	--
PARA 225	Basic management of medical emergencies lab	1	-	1	--	PARA 223
PARA 252	Introduction to civil defense	2	2	-	PARA 106	---
PARA 305	Pharmacology for paramedic students	2	2	--	MED 255	---
PARA 307	Pharmacology for paramedic students lab	1	-	1	--	PARA 305
PARA 309	Communication skills for paramedic students	2	2	-	PARA 208	--
PARA 311	Paramedic management of cardiopulmonary emergencies1	3	3	-	PARA 204	--
PARA 313	Paramedic management of cardiopulmonary emergencies1 lab	1	-	1	--	PARA 311

PARA 316	Paramedic management of cardiopulmonary emergencies 2	3	3	-	PARA 313	--
PARA 318	Paramedic management of cardiopulmonary emergencies 2 lab	1	-	1	--	PARA 316
PARA 334	Paramedic management of trauma and injuries	3	3	-	PARA 228	--
PARA 336	Paramedic management of trauma and injuries lab	1	-	1	--	PARA 334
PARA 345	Paramedic management of medical emergencies	3	3	-	PARA 225	--
PARA 362	Paramedic management of pediatric and maternity emergencies	3	3	-	PARA 204, PARA 200	--
PARA 364	Paramedic management of pediatric and maternity emergencies lab	1	-	1	--	PARA 362
PARA 371	Clinical training 1	3	---	3	PARA 225	PARA 313
PARA 372	Clinical training 2	3	---	3	PARA 371	--
PARA 393	Physical fitness and wellness	1	1	-	PT 218, MED 230A, MED 230B	--
PARA 395	Physical fitness and wellness lab	1	-	1	--	PARA 393
PARA 441	Paramedic management of neurological and psychological emergencies	3	3	-	PARA 204, PARA 309	--
PARA 443	Paramedic management of infectious, toxicological and environmental emergencies	3	3	-	BT 233, PARA 345	--
PARA 451	EMS and disaster management	3	3	-	PARA 252	--
PARA 471	Field training 1	4	-	4	PARA 315, PARA 372	--
PARA 472	Field training 2	8	-	8	PARA 471	--
PARA 486	Emergency management of special and critical cases	3	3	-	PARA 441, PARA 364	--
<b>TOTAL</b>		78	50	28		

Study Plan

FIRST YEAR													
First semester							Second semester						
Course No.	Course name	Total credits	Weekly hours		Prerequisite	Co-requisite	Course No.	Course name	Total credits	Weekly hours		Prerequisite	Co-requisite
			Lecture	Lab						Lecture	Lab		
ARB 101	Arabic language	3	3	-	--	--	HSS 119	Entrepreneurship and innovation	2	2	-	-	--
BT 103	General Biology	3	3	-	--	--	PT 218	Gross Anatomy & Histology	3	2	2	BT 103, BT 107	--
BT 107	General Biology lab	1	-	2	BIO 103 or co-requisite	--	MS 100	Military Sciences	3	3	-	--	--
CHEM 103	General chemistry	3	3	-	--	--	PARA 104	Introduction to Paramedic	2	2	-	--	--
CHEM 107	General chemistry lab	1	-	2	CHEM 103 or co-requisite	--	PARA 106	Introduction to Paramedic lab	1	-	2	--	PARA 104
HSS 110	Social Responsibility	3	2	1	--	--	HSS 129	General skills	2	2	-	LG 112	--
LG 112	English language 2	3	3	-	Passing LG 099 or passing English Language Placement Test with a grade > 50%	--	MED 230A	Human Physiology	3	3	-	BT 103	--
							MED 230B	Human Physiology lab	1	-	2	MED 230A or Co-requisite	--
<b>TOTAL</b>		<b>17</b>	<b>15</b>	<b>4</b>			<b>TOTAL</b>		<b>17</b>	<b>14</b>	<b>5</b>		

SECOND YEAR													
First semester							Second semester						
Course No.	Course name	Total credits	Weekly hours		Prerequisite	Co-requisite	Course No.	Course name	Total credits	Weekly hours		Prerequisite	Co-requisite
			Lecture	Lab						Lecture	Lab		
BT 231	Microbiology	3	3	-	BT 103		MED 255	Pharmacology	3	3	-	MED 230A, MED 230B	--
BT 233	Microbiology lab	1	-	3	BT 231 or Co-requisite		PARA 200	Growth and development for paramedic students	2	2	-	PT 218	--
CHEM 262	Biochemistry	3	3	-	BT 103, CHEM 103	--	PARA 208	Psychology and sociology for paramedic students	3	3	-	--	--
PH 311	Biostatistics	2	2	-	-	-	PARA 202	Health assessment	3	3	-	PT 218, MED 230A, MED 230B	--
University elective	3	3	-	--	--		PARA 204	Health assessment lab	1	-	2	--	PARA 202
PARA 223	Basic management of medical emergencies	3	3	-	PARA 106, MED 230A, MED 230B	MED 230B	PARA 226	Basic management of trauma emergencies	3	3	-	PARA 106, MED 230A, MED 230B	--
PARA 225	Basic management of medical emergencies lab	1	-	3	--	PARA 223	PARA 228	Basic management of trauma emergencies lab	1	-	2	--	PARA 226
							PARA 252	Introduction into civil defense	2	2	-	PARA 106	--
<b>TOTAL</b>		<b>16</b>	<b>14</b>	<b>6</b>			<b>TOTAL</b>		<b>18</b>	<b>16</b>	<b>4</b>		



THIRD YEAR													
First semester							Second semester						
Course No.	Course name	Total credits	Weekly hours		Prerequisite	Co-requisite	Course No.	Course name	Total credits	Weekly hours		Prerequisite	Co-requisite
			Lecture	Lab						Lecture	Lab		
PARA 305	Pharmacology for paramedic students	2	2	-	MED 255	--	PARA 316	Paramedic management of cardiopulmonary emergencies 2	3	3	-	PARA 313	--
PARA 307	Pharmacology for paramedic students lab	1	-	3	--	PARA 305	PARA 318	Paramedic management of cardiopulmonary emergencies 2lab	1	-	3	--	PARA 316
PARA 309	Communication skills for paramedic students	2	2	-	PARA 208	--	PARA 334	Paramedic management of trauma and injuries	3	3	-	PARA 228	--
PARA 311	Paramedic management of cardiopulmonary emergencies 1	3	3	-	PARA 204	--	PARA 336	Paramedic management of trauma and injuries lab	1	-	3	--	PARA 334
PARA 313	Paramedic management of cardiopulmonary emergencies 1lab	1	-	3	--	PARA 311	PARA 362	Paramedic management of pediatric and maternity emergencies	3	3	-	PARA 224	--
PARA 345	Paramedic management of medical emergencies	3	3	-	PARA 225	--	PARA 364	Paramedic management of pediatric and maternity emergencies lab	1	-	2	--	PARA 362
PARA 371	Clinical training 1	3	-	6	PARA 225	PARA 313	PARA 372	Clinical training 2	3	-	6	PARA 371	-
PARA 391	Ethics in applied medical careers	1	1	-	--	--		University elective	3	3	-	--	--
PARA 393	Physical fitness and wellness	1	1	-	PT 218, MED 230A, MED 230B	--							
PARA 395	Physical fitness and wellness lab	1	-	1	--	PARA 393							
<b>TOTAL</b>		<b>18</b>	<b>12</b>	<b>13</b>			<b>TOTAL</b>		<b>17</b>	<b>11</b>	<b>14</b>		

FOYRTH YEAR													
First semester							Second semester						
Course No.	Course name	Total credits	Weekly hours		Prerequisite	Co-requisite	Course No.	Course name	Total credits	Weekly hours		Prerequisite	Co-requisite
			Lecture	Lab						Lecture	Lab		
LM 491	Scientific research methods	1	1	-	PH 311	--	ADS 491	Administration and quality assurance in applied medical sciences	3	3	-	--	--
PARA 441	Paramedic management of neurological and psychological emergencies	3	3	-	PARA 204, PARA 309	--	LM 493	Research project	2	2	-	LM 491	--
PARA 443	Paramedic management of infectious, toxicological and environmental emergencies	3	3	-	BT 233 , PARA 345	--	PARA 472	Field training 2	8	-	16	PARA 471	--
PARA 451	EMS and disaster management	3	3	-	PARA 104, PARA 252	--	PARA 486	Emergencies management of special and critical cases	3	3	-	PARA 441, PARA 364	--
PARA 471	Field training 1	4	-	8	PARA 372	--							
	University elective	3	-	-	--	--							
<b>TOTAL</b>		<b>17</b>	<b>10</b>	<b>8</b>			<b>TOTAL</b>		<b>17</b>	<b>9</b>	<b>16</b>		

## Course Description

### **PARA 104 Introduction to paramedic(2 C. H)(Prerequisite: None)**

The profession of emergency health services at a basic level, and allows new students to explore and review their choices to continue with this profession. Pre-hospital environment through theory and clinical laboratory, basic skills and techniques required for the emergency medical technician-basic (EMT-B).The roles and responsibilities of the paramedic, medical legal considerations, communication, rescue and disaster operations, initial patient assessment, concepts of wellness, disease and injury prevention, and ethics and legal issues.

### **PARA 106 Introduction to paramedic lab(1 C. H) (Co-requisites: PARA 104)**

Skills of patient initial assessment and the basic knowledge for managing emergency situations.

### **PARA 200 Growth and development for paramedic students (2 C. H) (Prerequisite: MED 218)**

Different developmental stages. The psychology of each developmental stage from the embryo stage till the late adult.

### **PARA 208 Psychology and sociology for paramedic students (3 C. H) (Prerequisite: PARA 106)**

Psychology, paradigms, issues, debates, controversies, and physiological, cognitive developmental psychologies, relevance of sociology to health care, central components of socialization, cultural variations, culture values introduction to the components of stratification, social processes and defining disease - deviance, sick role and stigma.

### **PARA 222 Health assessment (3 C. H) (Prerequisite: MED 218, MED230B)**

Assessment of physiological, psychological, developmental aspects, normal physical findings and variations in health, relevant laboratory and diagnostic tests, and common drugs.

### **PARA 224 Health assessment lab (1 C. H) (Co-requisites: PARA 222)**

Primary skills of patient assessment which includes all the body systems from head to toe.

### **PARA 226 Basic management of trauma emergencies (3 C. H) (Prerequisite: PARA 106, MED230B)**

Causes and manifestations of different traumas. Initial emergency management for different traumas at the scene.

### **PARA 228 Basic management of trauma emergencies lab(1 C. H) (Co-requisites: PARA 226)**

Basic skills that are required for assessing different trauma patients: head and neck trauma, thorax trauma, spinal cord, abdominal trauma and burns.

**PARA 233 Basic management of medical emergencies (3 C. H) (Prerequisite: PARA 106)(Co-requisites: MED 230B)**

The management of the most common medical diseases. The role of the EMT-basic in assessing medical emergencies and providing the primary care.

**PARA 235 Basic management of medical emergencies lab (1 C. H) (Co-requisites: PARA 233)**

Basic skills of initial assessment for the most common medical emergencies.

**PARA 252 Introduction to civil defense (2 C. H) (Prerequisite: PARA 106)**

The Jordanian Civil Defense; its construction, roles, responsibilities, and services. The importance of an integrated emergency response system, related professions such as fire, police, air ambulance and various related community services, procedures of evacuation and rescuing, disaster management, and methods of designing shelters.

**PARA 305 Pharmacology for paramedic students (2 C. H) (Prerequisite: MED 255)**

Drug classifications, categories, mechanism of action, implications of use and paramedic responsibilities, drug interactions and adverse reactions, dosage computations and measurements, as well as adult, pediatric and geriatric medication considerations.

**PARA 307 pharmacology for paramedic students lab (1 C. H) (Co-requisite: PARA 305)**

Emergency medications, doses calculations according to age. Study the skills of medication administration according to different routes.

**PARA 309 Communication skills for paramedic students (2 C. H) (Prerequisite: PARA 208)**

Basic communication skills, models and processes in communication which enables the paramedic to conduct a thorough patient assessment in order to provide a better quality of care. The communication with special needs patients (e.g. with acute mental illness, developmental disabilities or sensory deficits; angry, distressed or intoxicated patients, children and the elderly), building cooperative relationships with patients and colleagues.

**PARA 311 Paramedic management of cardiopulmonary emergencies1 (3 C. H) (Prerequisite: PARA 224)**

Study of anatomy and physiology of the heart, lungs and circulatory system, electrophysiology, assessment of the cardiac patient, conducting, assessing, and interpreting an electrocardiogram ECG, pathophysiology of atherosclerosis, specific conditions resulting from atherosclerotic heart disease, peripheral vascular emergencies, pharmacologic intervention, dysrhythmia recognition, and specific management of cardiac emergencies.

**PARA 313 Paramedic management of cardiopulmonary emergencies 1lab(1 C. H) (Co-requisite: PARA 311)**

Assessment of the heart, lungs and circulatory system, electrophysiology, assessment of the cardiac patient, conducting, and interpreting an electrocardiogram ECG, pathophysiology of atherosclerosis, specific conditions resulting from atherosclerotic heart disease, peripheral vascular emergencies, pharmacologic intervention, dysrhythmia recognition, and specific management of cardiac emergencies.

**PARA 316 Paramedic management of cardiopulmonary emergencies 2 (3 C. H) (Prerequisite: PARA 313)**

Reading and analyzing of the ECG. Basic skills of the CPR. How to deal with the mega codes.

**PARA 318 Paramedic management of cardiopulmonary emergencies 2 lab(1 C. H) (Co-requisite: PARA 316)**

Acquiring the skills of reading and analyzing of the ECG. Basic skills of the CPR. Learn how to deal with the mega codes.

**PARA 334 Paramedic management of trauma and injuries(3 C. H) (Prerequisite: PARA 228)**

Pathophysiology, assessment of the trauma patient, management of head injuries, spinal cord, spinal injuries, chest injuries, abdominal injuries, burn injuries, orthopedic injuries, management of the multi-trauma patient, assessment and management of the various types of shocks, role of kinematics as an additional tool of patient assessment, applies principles of kinematics to assessment of patients who were involved in various mechanisms of injury including; Motor Vehicle Collisions (rotational impact, rear impact...) motorcycle, bicycle, pedestrian vs. vehicle, and fall.

**PARA 336 Paramedic management of trauma and injurieslab(1 C. H) (Co-requisite: PARA 334)**

Acquiring the skills of the assessment of the trauma patient, management of head injuries, spinal cord, spinal injuries, chest injuries, abdominal injuries, burn injuries, orthopedic injuries, management of the multi-trauma patient, assessment and management of the various types of shocks, role of kinematics as an additional tool of patient assessment, applies principles of kinematics to assessment of patients who were involved in various mechanisms of injury including; Motor Vehicle Collisions (rotational impact, rear impact...) motorcycle, bicycle, pedestrian vs. vehicle, and fall.

**PARA 345 Paramedic management of medical emergencies (3 C. H) (Prerequisite: PARA 235)**

The epidemiology, prevention, integrated and definitive care, pathophysiology, assessment and clinical management of patients suffering from genitourinary, metabolic, endocrine, neurological and gastrointestinal disease.

**PARA 362 Paramedic management of pediatric and maternity emergencies (3 C. H) (Prerequisite: PARA 224)**

The anatomy and physiology of the female reproductive system, assessment of the gynecologic patient, management of gynecologic emergencies, management of complications associated with pregnancies, management of deliveries (normal, abnormal and complicated), and the care provided immediately post-delivery to both; mother and its newborn. Fetal monitoring and transitional phase between intrauterine and extra-uterine lives will be discussed as well. Students will have the opportunity to participate in normal and abnormal obstetrical problems at the clinical and/or preclinical environment as possible

**PARA 364 Paramedic management of pediatric and maternity emergencies lab(1 C. H) (Co-requisite: PARA 362)**

Management of gynecologic emergencies, management of complications associated with pregnancies, management of deliveries (normal, abnormal and complicated), and the care provided immediately post-delivery to both; mother and its newborn. Fetal monitoring and transitional phase between intrauterine and extra-uterine lives will be discussed as well. Students will have the opportunity to participate in normal and abnormal obstetrical problems at the clinical and/or preclinical environment as possible

**PARA 371 Clinical training 1 (3 C. H) (Prerequisite: PARA 235)**

Training in the hospital's emergency departments and the simulation lab. The skills in dealing with the emergency cases in the hospital.

**PARA 372 Clinical training 2 (3 C. H) (Prerequisite: PARA 371)**

Training in the hospital's Emergency departments. The skills in dealing with the emergency cases through weekly training in the lab and the hospitals with focusing on the more advanced skills

**PARA 391 Ethics in applied medical careers (1 C. H) (Prerequisite: None)**

Ethical issues in applied medical careers have been prominent in recent years. The philosophical theories of ethics, patient-health provider relationship, patient's rights, code of ethics, and health communication.

**PARA 393 Physical fitness and wellness (1 C. H) (Prerequisite: MED 218, MED 230B)**

Strength component focusing on safe lifting practices, swimming and diving, cardiovascular fitness and flexibility, development, implementation, monitoring of a personal training program, promotion of a healthy life style, highlighting nutrition, stress management through sports and physical activities.

**PARA 395 Physical fitness and wellness lab(1 C. H) (Co-requisite: PARA 393)**

Training programs to increase the students' fitness and wellness.

**PARA 441 Paramedic management of neurological and Psychological emergencies (3 C. H) (Prerequisite: PARA 224, PARA 309)**

Different neurological, behavioral, and psychological emergencies. Assessment of neurological emergencies such as the epilepsy, stroke, and degenerative disease, infectious diseases of nervous system, drug administration and maintenance related to behavioral and neurological emergencies, and management techniques for different neurological, behavioral and psychological suicidal situations.

**PARA 443 Paramedic management of infectious, toxicological, and environmental emergencies(3 C. H)(Prerequisite: BT 233, PARA 345)**

Epidemiology, pathophysiology, assessment and clinical management of patients with toxicological, infectious and environmental illness, overdose, poisoning, and acute infectious disease.

**PARA 451 EMS and disaster management (3 C. H) (Prerequisite: PARA 252)**

The theoretical principles of EMS systems. Ground transportations; indications and restrictions, system status management, air medical (flight) transportation (types; fixed, rotor wing, indications, contraindications, considerations, flight physiology), inter-facility transportation, critical care transportation, and pediatric transportation considerations. Disaster management and the theoretical principles necessary to manage crisis and multi-casualty incidents under field conditions. System response to disaster, acute and chronic medical needs post disasters, triage principles, medical evacuation procedures, disaster preparation, and disaster mitigation.

**PARA 471 Field training 1 (4 C. H) (Prerequisite: PARA 372)**

Skills include assessing, diagnosing, planning, implementing, evaluating patient care in the out of hospital phase, effective scene management including logistics, safe access and egress, and patient extrication techniques, written and oral communication including patient interviews, radio procedures, writing ambulance report forms and patient handover at hospital.

**PARA 472 Field training2 (8C. H) (Prerequisite: PARA 471)**

Skills include assessing, diagnosing, planning, implementing, evaluating patient care in the out of hospital phase, effective scene management including logistics, safe access and egress, and patient extrication techniques, written and oral communication including patient interviews, radio procedures, writing ambulance report forms and patient handover at hospital.

**PARA 486 Emergency management of special and critical cases (3 C. H) (Prerequisite: PARA 441)**

The pre-hospital care for the critical cases, geriatric and those with special needs.