

Kingdom of Saudi Arabia  
Ministry of Higher Education  
Umm Al Qura University  
Faculty of Applied Medical Sciences  
Department of clinical Technology  
Division of Emergency Medical Service

2014-2015

# B.Sc. in Emergency Medical Service Student Manual



Shaping Future with Quality Education

Department of Emergency Medical Service Student Manual Catalog  
Copyright © 2014, Faculty of Applied Medical Sciences

**Published by:**

Faculty of Applied Medical Sciences  
Department of clinical technology /Emergency Medical Services  
Umm Al Qura University, Makkah  
P. O. Box – 715 (University Campus)  
Makkah  
Kingdom of Saudi Arabia  
Tel +966 - 12-5270000

## Table of Contents

<b>S. No</b>	<b>Content</b>	<b>Page Number</b>
1	A Walk Through Umm Al Qura University – Makkah	3
2	Faculty Dean Administration	4
3	Faculty Teaching Members	5
4	Department of Emergency Medical Service Department <ul style="list-style-type: none"> <li>• Goals, Values, Mission and Vision of EMS Program</li> </ul>	5 & 6
5	Objectives of EMS Program	7
6	Program Structure	8
	Admission Requirements for the program	9
8	Dissertation/ Internship	13
9	Attendance and Completion Requirements	14
10	Regulations for Student Assessment and Verification of Standards	15
11	Detailed Course of Study	17, 18 & 19
12	Benefits of Studying at EMSC	20-22
13	Rules and Regulations in ARABIC	20-23

# A Walk Through Umm Al Qura University – Makkah

---

Umm Al-Qura University is a public university in Makkah, Saudi Arabia. It was established as the College of Shari`a (Islamic Law) in 1949 before being joined by new colleges and renamed Umm Al-Qura by royal decree in 1981.

Umm Al-Qura University is primarily an Islamic university that offers degrees in Islamic Law and Arabic language studies. However, it offers scores of degrees in Public Health & Health Informatics, Technology, Management, Engineering, Medicine, Education, as well various Applied Sciences.

## **History**

In 1949 King Abdul Aziz Al-Saud established the College of Shari'a (Islamic Law) in Makkah, making it the first higher education institution in the country. It constituted the kernel of Umm Al-Qura University and its most prominent college. It was followed by the establishment of the Teachers' College in 1952. This continued until 1959 when the College of Shari'a took the responsibility of teachers' preparation and became the College of Shari'a and Education. In 1962 the College of Education was established as an independent college.

In 1971 the Colleges of Shari'a and Education became part of King Abdul Aziz University in Jeddah and constituted its branch in Mecca. However, The University of Umm Al-Qura was established in 1981 by the royal decree number 39 in 1981 and the colleges of Shari'a and Education were detached from King Abdul Aziz University and joined by new departments to form the new university.

---

## Faculty Administration

---

**Dean** Dr. Ahmad Mohammed Ashi

**Vice Dean for Academic Development & Community Services:** Dr. Ali Thabet

**Vice Dean for Hospital Affair:** Mohammed Khan

**Vice Dean for Academic Affairs:** Dr. Saad Alghamdi

**Director of Administration:** Mr. Talal Alhasani

**Quality Assurance:** Dr. Amr Mohammed

## Faculty Teaching Members

---

### Department of Health Information Management & Technology

1. Mr. Issa Hussien
2. Dr. Essam Mehlab
3. Dr. Ahmed Shamah
4. Dr. Ashraf Albech
5. Mr. Baha'a Nasser
6. Mr. Abdullah Baniyousef
7. Mr. Ibrahim Althkafi
8. Mr. Mohammed Alyousef

## Department of Emergency Medical Service Department

---

### Goals, Values, Mission and Vision of EMS Program

#### Goals:

- To ensure a leading role for the research, teaching and education of Islam and Arabic in order to benefit the many causes of Islamic societies and the better of mankind in general.
- To become a reference to solve problems relating to Makah, the holly sights and to develop the environment and society, alike.
- International outputs.
- To produce useful knowledge through research.
- To reinforce teamwork within the university.
- To achieve permanent development.
- To fulfill societies demands.
- To secure the participation of the private and public sectors.

**Values:**

- The land of Islam and Arabic. A faith and heritage that must be preserved.
- An Islamic perspective for the stabilization and cooperation of nations in this global age.
- General Quality Assurance is the first choice and foundation of a stable development.
- To adapt continues education method.
- To be fully committed to the community and it's needs
- To communicate and cooperate with public agencies, the private sectors and national and international universities.
- Committing to the objective of providing the learning environment to teach and train students on academic research.
- To develop the skills and abilities of students with special talents and students with special needs.
- To commit to the responsibility to the community by providing the best services to Makkah, the holly sight sand their visitors.
- To use available recourses the best way possible.

**Mission**

Training of national paramedics and rehabilitation to provide the highest level of performance in the specialized field of emergency medical service.

## **Vision**

Become a pioneer in providing state-of-the-art educational environment, allowing students to cultivate paramedics into the health care provider community, driven by compassion, guided by science, toward the safest patient care.

## **Objectives of EMS Program**

---

---

### **Objectives of EMS Program**

1. Prepare the trainee physically and mentally and psychologically to provide emergency medical service for people in medical emergencies in a timely manner carefully and safely.
2. Student Emergency treatment of accidents and disasters.
3. The ability to assess and act on the basis of medical wise and appropriate immediate intervention to save life, particularly in the case of interruption of communication avenue medical administrator.



# Program Structure

## Curriculum Table Content BSc. in Emergency Medical Service

Course title	Code	Credit Hours	Course title	Code	Credit Hours
English language	4800104-3	6	Basic Biochemistry 2	480121-2	2
Computer Skills 1	4800170-2	2	Basic Computer Programming	4810111-3	3
Learning Skills	4800104-3	3	Introduction to Medical Physics	4800131-4	4
Basic Biochemistry 1	4810110-2	2	Medical English Language	4800153-4	4
Basic Human Genetics	4810120-2	2	Cytology	4810173-4	3
<b>Total</b>		<b>15</b>	<b>Total</b>		<b>16</b>

### B) University Requirement:

Course title	Code	Credit Hours	Course title	Code	Credit Hours
Quran 1	605101-2	2	Islamic Culture	601101-2	2
Quran 2	605201-2	2	Islamic Culture	601201-2	2
Quran 3	605301-2	2	Islamic Culture 4	601301-3	3
Quran 4	605401-2	2	Islamic Culture	601401-2	2
Arabic language	501101-2	2	Prophets Biography	102101-2	2
<b>Total</b>		<b>10</b>	<b>Total</b>		<b>11</b>

**C) EMS Requirement:**

<b>Course title</b>	<b>Code</b>	<b>Credit Hours</b>	<b>Course title</b>	<b>Code</b>	<b>Credit Hours</b>
General anatomy	1706134-3-3	3	Cardiac Emergencies	1706163-5	5
EMT Basic Principles	1706130-5	5	Trauma for advanced life support (1)	1706161-3	3
EMT Basic Skills	1706133-5	5	Clinical Practice 4	1706160-2	2
Medical Terminology (1)	170613-1	1	Respiratory Emergencies	1706172-5	5
Clinical Practice 1	1706131-2	2	Basic Pharmacology	1706173-5	5
Medical Terminology (2)	170614-1	1	Clinical Practice 5	1706171-2	2
Emergency Patients Assessment ( Trauma and Medical)	1706144-5	5	Gynecology and Pediatrics Emergencies	1706162-5	5
EMT Basic Skills for Medical Emergencies	1706143-0	5	Advanced Trauma Emergencies (2)	1706170-3	3
Clinical Practice 2	1706142-2	2	EMS-Research	1706182-6	6
Human Body Science	1706141-4	4	Clinical Practice 6	1706183-2	2
Ambulance & Rescue Operation	1706150-5	5	Advanced Cardiac life Support ( ACLS)	1706180-5	5
Advanced Airway Management	1706152-3	3	Cores Skills & Field Investigations	1706181-5	5
Clinical Practice 3	1706153-2	2	EMT Basic Skills for Trauma	1706151-5	5
<b>Total</b>		<b>43</b>			<b>53</b>
<b>All program</b>			<b>148 Hours</b>		

- Total credit hours of Bachelor degree of Emergency Medical Services including preparatory year are: 148 hours.
- Four years Academic Education (8 Semesters)
- One year internship in Red Crescent Center & hospitals.

### Modules Distribution

No.	Requirements	No. of Credit Hours
1	Pre -preparatory Year Requirements	31
2	University Requirements	21
4	EMS Core Requirements	96
	<b>Total</b>	<b>148</b>

### Modules Distribution in numbers

- |                            |            |
|----------------------------|------------|
| 1- University Requirements | 10 Modules |
| 2- Faculty Requirement     | 10 Modules |
| 3- EMS requirement         | 26 Modules |

## Study Plan

### First year (preparatory year):

First semester			Second semester		
Course Title	Code	C. Hr	Course Title	Code	C. Hr
English language	4800170-6	6	Basic Biochemistry 2	4810121-2	2
Computer Skills 1	4800150-2	2	Basic Computer Programming	4800153-3	3
Learning Skills	4800104-3	3	Introduction to Medical Physics	4800131-4	4
Basic Biochemistry 1	4810110-2	2	Medical English Language	4800173-4	4
Basic Human Genetics	4810120-2	2	Cytology	4810111-3	3
<b>Total</b>		<b>15</b>	<b>Total</b>		<b>16</b>

### Second Year:

First semester			Second semester		
Course Title	Code	C. Hr	Course Title	Code	C. Hr
Quran 1	605101-2	2	Islamic Culture I	601101-2	2
Arabic language	501101-2	2	Prophets Biography	102101-2	2
General anatomy	1706134-3	3	Medical Terminology (2)	1706140-1	1
EMT Basic Principles	1706130-5	5	Emergency Patients Assessment (Trauma and Medical)	1706144-5	5
EMT Basic Skills	1706133-5	5	EMT Basic Skills for Medical Emergencies	1706143-5	5
Medical Terminology (1)	1706132-1	1	Clinical Practice 2	1706142-2	2
Clinical Practice 1	1706131-2	2	Human Body Science	1706141-4	4
<b>Total</b>		<b>20</b>	<b>Total</b>		<b>19</b>

**Third Year:**

First semester			Second semester		
Course Title	Code	C. Hr	Course Title	Code	C. Hr
Quran 2	605201-2	2	Quran 3	605301-2	2
Islamic Culture 2	601201-2	2	Islamic Culture 3	601301-3	3
Ambulance & Rescue Operation	1706150-5	5	Gynecology and Pediatrics Emergencies	1706162-5	5
Advanced Airway Management	1706152-3	3	Trauma for advanced life support 1	1706161-3	3
EMT Basic Skills for Trauma	1706151-5	5	Clinical Practice 4	1706160-2	2
Clinical Practice 3	1706153-2	2	Cardiac Emergencies	1706163-5	5
<b>Total</b>		<b>19</b>	<b>Total</b>		<b>20</b>

**Fourth Year:**

First semester			Second semester		
Course Title	Code	C. Hr	Course Title	Code	C. Hr
Quran 4	605401-2	2	Islamic Culture 4	601401-2	2
Respiratory Emergencies	1706172-5	5	Advanced Cardiac life Support	1706180-5	5
Advanced Trauma Emergencies 2	1706170-3	3	Cores Skills & Field Investigations	1706181-5	5
Basic Pharmacology	1706173-5	5	EMS-Research	1706182-6	6
Clinical Practice 5	1706171-2	2	Clinical Practice 6	1706183-2	2
<b>Total</b>		<b>17</b>	<b>Total</b>		<b>20</b>
			<b>Internship</b>	17061500-0	

## Dissertation/ Internship

---

Students of BEMS program have to undergo one year internship in healthcare settings. The field experiences will involve practical hands-on experiences in various professional settings and environments that are relevant to the specific program. Environments will include public and private settings and will provide the opportunity for students to observe and participate in events, activities, and projects occurring in these environments. Students will be expected to apply the knowledge and skills they have learned in their other courses to the field experience.

Students should undertake a program of six credited hours to have research methodology course and to write a thesis under the supervision of the department to get BEMS degree.

## Admission Requirements for the program

---

Information regarding general regulations, academic policies and procedures that govern the Baccalaureate of Science in Emergency Medical Service program are within the context of the Ministry of Higher Education statutes and regulations. Admission requirements for the Health Information Management Program are the same as those for the Faculty of Public Health & Health Informatics, Umm Al Qura University, Makkah, Kingdom of Saudi Arabia.

According to rules and regulation of Umm Al Qura University :

- ✓ The students must hold a High school certificate or equivalent that is acquired from Saudi Arabia or any recognized school abroad, with a general rate not less than 90%.
- ✓ The specialized subject (chemistry, physics, biology and English Language) rate has to be not less than 90%.

- ✓ High school certificate must be acquired within two years, and the UQU has the right to exclude from this condition those who hold the degree but not exceeding five years if the student provides a satisfactory reason.
- ✓ Good reputation.
- ✓ To be physically fit.
- ✓ Must complete all requirements that are suggested and accepted by the university panel

## Attendance and Completion Requirements

---

A student's total marks in a given course is the summation of his/her marks in the final written exam, final lab / practical / clinical exam, final oral exam, in addition to the marks of the quizzes and project presentation, class activities and periodical examinations.

To be considered pass, the student is required to get a minimum of 60% of the total marks of the course.

### **Attendance:**

Students are required to attend all classes and to arrive for class on time and not to leave class early except for excused absences. An excused absence is defined as one resulting from serious illness (requires note from medical professional), the death of a close relative (requires notification from Division of Student Development), an approved university trip (requires note from professor), or for religious observations and activities.

- ✓ Minimum Attendance Percentage: 75%

### **Progression from year to year:**

In order to progress from year to year a student must successfully complete all of the courses and requirements each year before progressing to the following year. Requests for accommodations for extenuating or special circumstances can be submitted to the Department Chair.

## Program completion

In order to complete the Bachelor of Emergency Medical Service (BMS) Program successfully each student must:

- ✓ Complete the 148 credit hours
- ✓ Complete and pass all university, college, and program courses.
- ✓ Maintain a minimum of 60% Marks in each course.
- ✓ Meet all university, college, and program requirements
- ✓ After Passing the internship in final year

# Regulations for Student Assessment and Verification of Standards

---

## Distribution of Marks

Exams	Marks	Percentages of Marks
Mid Term Exam 1	20	20%
4 Quizzes	20	20%
Presentations	05	05%
Assignment	05	05%
Final Exams	50	50%
<b>Total</b>	<b>100</b>	<b>100%</b>



**Grading Scale**

PERCENTAGES OF MARKS	LETTER GRADE
95 - 100 %	A+
90 - < 95 %	A
85 - < 90 %	B+
80 - < 85 %	B
75 - < 80 %	C+
70 - < 75 %	C
65 - < 70 %	D+
60 - < 65 %	D
< 60 %	F

**Detailed Course of Study:**

Core Course to be taught by Department of Emergency Medical Service for BSc in Emergency Medical Service, Faculty of Public Health & Health Information Technology, Umm Al Qura University, Makkah, and Kingdom of Saudi Arabia.

**Detailed Course of Study (Course Descriptions):****EMS Modules****1. Medical Terminology(1)**

The aim of this course is to give the students an effective control of medical English by acquiring a high degree of proficiency. At the end of the course, the students' language skills should have reached the level of intermediate to high intermediate, which will be adequate for English text reading & effective communication with medical staff.

## **2. EMT Basic Principles**

The aim of the course is to expose the student to essentials of how to get prepared to work in emergency medical services in the prehospital field. The subject will focus on the basic principles that compose the system required for the service to be provided starting from the well-being of the technician in this specialty.

## **3. EMT Basic Skills**

Course design is to allow the student to fully understand the emergency patient approach and assessment and at the end of this course student will be able to perform all basic resuscitation skills necessary for caring of the sick and injured.

## **4. Human Body Science**

This course involves the study of human body structure and function. This curriculum covers all aspects required for the EMT-Paramedic and is considered an addition to the basic year curriculum. It will involve a systemic study of structure and function of the body parts related to the advanced EMT skills with focus on Respiratory, Cardiac systems, Nervous, & endocrine.

## **5. Emergency Patients Assessment (Trauma & Medical)**

This part of the curriculum is focused on the teaching of the students the skills for assessment of the Trauma patient. Skills taught in this course are basically the systematic approach to the determination of the possible extent of injury, clinical decision making on priority of management after careful assessment of the sick & the injured (assessment based management).

The course also is designed to teach the students the skills necessary for assessing the medical emergencies in a systematic fashion 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.

## **6. Ambulance and Rescue Operations**

Provides the theory and skill development related to Module 8 of the US D.O.T. paramedic curriculum, for medical incident command, rescue operations and awareness, basic water rescue, highway/vehicle rescue operations, hazardous materials awareness and operations, and crime scene awareness.

The aim of the course is to introduce the student to the necessary skills required to safely operate ambulance vehicles while responding to the emergency and while transferring the patient to designated final case center.

In addition, the course teaches the student the ethics and basics of how to manage multiple patients that usually arise in cases of disasters. In this part, the student will learn the essentials of planning and responding in team approach with his main intention to save maximum lives of the sick and the injured.

### **7. EMT Basic skills for Medical Emergencies**

The course is focused to take the student through the different medical emergencies. The main objective of the course is to give the student a solid background on signs and symptoms of the illness, focused assessment techniques, and basic patient management, the medical emergencies included in this course are all emergencies except cardiac and respiratory. This course trains the student to provide emergency care for patients with emergency illnesses after recognition of patient conditions. He is taught in this program how to decide on the essentials of basic care and how to continue the care provided during emergency ambulance transportation to the hospital emergency department.

### **8. EMT Basic skills for Traumatic Emergencies**

This part of the curriculum is focused on the Trauma management; the main skills taught in this course are the determination of the possible extent of injury, critical decision making on priority of management after careful assessment of the injured. It also teaches the student the use, indications and appropriate use of related ambulance equipment necessary for patient care.

This course trains the student to provide emergency care for patients with traumatic injuries after recognition of patient conditions. He is taught in this program how to decide on the essentials of basic care and how to continue the care provided during emergency ambulance transportation to the hospital emergency department.

### **9. Advanced Air way Management**

This course gives the students the advanced skills required to handle obstructed airway, it includes techniques of artificial ventilation by bag valve mask and insertion of endotracheal tubes for adults and pediatrics. This course trains the student to master the advanced skills of airway management to be used in the field for both trauma and medical patients when the need arise.

### **10. Gynecology, Obstetric & Pediatric Emergencies**

This subject is designed to support the student with basics of emergencies that could occur to females in relation to their reproductive system. In addition, the student is able to identify problems in both the female and the children newly born with the goal

to assist in saving their lives in case of any emergency related to normal delivery and vaginal bleedings. EMT students will be taken through the differences between adults and children in this course to be able to handle pediatric emergencies in a safe way

This course trains the student to provide emergency care for patients with Obstetric, gynecological emergency. In addition to this, it focuses also on pediatric emergencies. The student will react to these emergencies after recognition of patient conditions to be able to decide on the essentials of basic care and how to continue the care provided during emergency ambulance transportation to the hospital emergency department.

### **11. Cardiac Emergencies**

This course is designed to provide the student with the advanced knowledge of urgent diseases and disorders affecting the cardiac system emphasizing diagnosis, interpretation of cardiac rhythm abnormalities, when to intervene, the use appropriate ambulance equipment, selection and implementation of therapeutic modalities.

This course prepare the student with more advanced skills in cardiac emergency patient assessment; with emphasis on physician medical control, use of intravenous therapy for fluid resuscitation or medication administration; in addition to the application of advanced airway and ventilatory management. It also teaches the student the administration of specific medications under current protocols accepted and adopted by the American Heart Association. This program will also support the student by preparing him to interpret the cardiac rhythm and monitor basic dysrhythmias.

### **12. Trauma for advanced life support (1)**

The student in this course is taught essentials and techniques designed by the American college of surgeons to handle the trauma victim in a pre-hospital setup. This program summarizes the skills completed previously and presents it to the student in a practical applicable way. After the completion of this training, the student will acquire a systematic approach to the trauma patients in the field& emergency rooms.

### **13. Trauma for advanced life support (2)**

The student in this course is taught essentials and techniques designed by the American college of surgeons to handle the trauma victim in a hospital setup. This program summarizes the skills completed previously and presents it to the student in a practical applicable way. After the completion of this training, the student will acquire a systematic approach to the trauma patient in the field &emergency rooms.

**14. Basics in Pharmacology**

This course is designed to introduce the students to the principles of pharmacology, pharmacodynamics, and pharmacokinetics, and includes a comprehensive study of drug action, routes of administration, and classes of drugs by body system, as well as antibiotics, IV fluids, blood products, anesthetics, emergency drugs.

**15. Respiratory Emergencies**

This course is designed to provide the student the knowledge of diseases and disorders affecting the respiratory system emphasizing Bronchial asthma, Respiratory difficulties, Respiratory arrest, and how to implement therapeutic modalities. It also help the student understand more the use of ambulance equipment related to the advanced care of respiratory emergencies.

**16. Advanced Cardiac Life Support (ACLS)**

This ACLS component of the course is designed to prepare the student with knowledge of the principles recognizing 12 lead normal cardiac rhythms, types of cardiac arrest, abnormal conduction rhythms, and types of arrhythmias. It will also teach the student the cardiac medications used for resuscitation from cardiac arrest. This section provides realistic scenarios that reinforce the skills required for the advanced CPR.

This course prepare the student with more advanced skills in cardio respiratory emergency patient assessment; with emphasis on physician medical control, use of intravenous therapy for fluid resuscitation or medication administration; in addition to the application of advanced airway and ventilatory management. It also teaches the student the administration of specific medications under current protocols accepted and adopted by the American Heart Association.

**17. Core Skills & Field investigations**

This subject is designed to support EMT students with the skills necessary to help the sick and the injured in the field. These skills are for use on the core of the patient to help administer medications, use intravenous lines and medications and apply electric shock to the arrested cardiac muscle. It also teaches the student to apply investigations that help assess progress to interference of the EMT like glucometer and pulse oximetry. This course prepares the student with new concepts in management of patient by adding the skills to use equipment on the body of the patient to increase

**18. General Anatomy**

This course consists of twenty-two modules that have been designed to develop an understanding of the structure and function of organs and systems in the normal

human body. A study of basic chemical principles is included. Medical terminology is expanded and pathology is introduced. This course is intended to extend the learner's prior knowledge of high school biology and provide background awareness of the human body in health and disease.

### **19. EMS Research**

The course is designed as a foundation for students entering tertiary health sciences programs. Students will learn to identify, retrieve and critically evaluate information pertaining to the health sciences. Tutorials and assessments will focus on proficiency of written and oral communications. Students will understand research methodology and the use of statistics in informing clinical practice. Students will be introduced to evidence based practice and understand its importance in their specific profession or discipline. Distance education (FLEX) students will be required to have access to a computer to make frequent use of internet resources.

### **20. Medical Terminology (2)**

The aim of this course is to give the students an effective control of medical English by acquiring a high degree of proficiency. At the end of the course, the students' language skills should have reached the level of intermediate to high intermediate, which will be adequate for English text reading & effective communication with medical staff.

### **21. Clinical Practice 1 , 2 .3 ,4 .5. 6**

Training in hospitals and Red Crescent Centers.

### **One Year Internship**

- Following the completion of the study program, the student will receive practical training by being attached at a well-recognized ambulance service and a hospital. The clinical internship program is designed to provide the emergency medical technician with a broader and wider scope of experience, which will reinforce the learning skills obtained from classroom and laboratories instruction. The performance will be carefully monitored according to a specific set of continuous assessment criteria. Prior to the internship program, the candidates will be required to fulfill the requirements of all courses in practical training. No exception to carry over one course during internship.

- One year practice will be divided into two areas hospital which has EMS centers for 6 months and other 6 months in Red Crescent centers all the practice period will be in KSA.

\*\*\*\*\*

## Benefits of Studying at EMS.

---

---

- ✓ Unique study environment
- ✓ Fully Wi-Fi zone
- ✓ Library premises within the Faculty
- ✓ Computer Labs with Internet Facility
- ✓ Group Discussion and unique learning methods
- ✓ Industrial Tour for training
- ✓ Assistance in Job Placement
- ✓ Medical Facilities available for students etc..

## Awards of Degree

---

---

After successfully completion of 5 years study and internship students will be awarded a BSc Degree in Emergency Medical Service from Umm Al Qura University.

## Academic Calendar 2014-2015

Please visit university website: [www.uqu.edu.sa](http://www.uqu.edu.sa)