



EMERGENCY MEDICAL SERVICES PROGRAM HANDBOOK

COLLEGE OF APPLIED MEDICAL SCIENCES-RIYADH, KSAU-HS

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1.0 College and Program Management

To achieve academic excellence in Emergency Medical Services through using advanced methods of teaching, innovative research, and community services.

2.0 College and Program Management

Name	Position	Branch
Dr. Abdullah Al Abdali	Dean	Riyadh Branch
Dr. Abdulrhman Alghamdi	Program Chairman	
Dr. Meshary Bin Hotan	Assistant Professor	
Dr. Abdullah Al Shibani	Assistant Professor	
Dr. Meshal Al Harbi	Assistant Professor	
Mr. Maree Al Anazi	Lecturer	
Mr. Ahmad Al Otaibi	Teaching Assistant – on scholarship	
Ms. Sara Alsuwais	Teaching Assistant – on scholarship	
Ms. Amani Al Enazi	Teaching Assistant – on scholarship	
Ms. Aljawhara Al Mubarak	Teaching Assistant – on scholarship	
Ms. Alanowd Al Ghaith	Teaching Assistant – on scholarship	
Mr. Khaled Al Shammari	Teaching Assistant	

3.0 Program Goals:

- Enhancing the quality of EMS program to graduate paramedics meeting the programs graduates' attributes.
- Enhancing innovative research in EMS and other scholarly activities.
- Encouraging community services participation and initiating sustainable community partnerships

4.0 Graduate Attributes:

The graduates from EMS program will be qualified to provide pre-hospital care, improve EMS relevant research areas, and participate in community services. The graduate attributes are aligned with Program Learning Outcomes, and will be measured periodically, as shown in the table below.

Program/Graduate Attributes	College Graduate Attributes	Institutional Graduate Attributes
In depth knowledge of pre-hospital emergency cases.	Excellence and innovation in education	In-depth knowledge
Critical thinking and problem solving generally and within pre-hospital environment specifically.	Integration of contemporary technologies	Critical thinking and problem solving
Professional researcher.	Personal, professional, and scholarly development	Proficiency in research
Safe patient care and competency in paramedic skills.	Commitment to lifelong learning	Life-long learning
Professional and effective communication.	Effective communication and teamwork	Efficient in teamwork
Efficient in teamwork.	Ethical behavior and Islamic Value	Versed in ethics concepts
Lifelong learner.	Integrity in personal and professional life	Effective communication
Compliant with ethics concepts. d competent patient care	Safe patient care and competency in discipline-related skills	Safe patient care and competency in discipline-related skills

5.0 Program Learning Outcomes:

Knowledge and Understanding	
K1	Describe the roles and responsibilities of paramedics within the EMS system and out-of- hospital environment.
K2	Define the general concepts of assessment and management of emergency patients in pre- hospital settings.
K3	Outline the pathophysiological principles of pharmacology and the field impression of its pharmacologic management plan in hospital & pre- hospital settings.
K4	Describe pathophysiological, physiological, anatomical, psychological, and sociological changes of human development for all ages.
Skills	
S1	Demonstrate scientific research, community, and interprofessional activities related to emergency medical services
S2	Demonstrate life-saving tasks for medical and trauma patients as a paramedic within out-of- hospital environment.
S3	Evaluate field impression, history taking, and treatment plan for the medical, pediatric, neonatal, and trauma patients in pre- hospital environment.
S4	Evaluate the need for medications and diagnostic tools of the patient that requires immediate treatment and apply the appropriate intervention within out-of- hospital

	environment.
Values	
V1	Demonstrate leadership and teamwork skills and adhere with ethical behavior for accomplishing common goals in pre- hospital settings.
V2	Implement confidence and self-sufficiency for further enhancement of knowledge and clinical skills training as paramedics to ensure patient's safety in hospital or out- of- hospital settings.

6.0 Program Admission and Support:

1. Student Admission Requirements
<p>Admission to KSAU-HS depends on the competition for available seats annually according to the admission criteria.</p> <ul style="list-style-type: none"> Admission Criteria: <ul style="list-style-type: none"> https://www.ksauhs.edu.sa/Arabic/admission/pages/admissionrequirementsm_r.aspx http://cams.ksau-hs.edu.sa/index.ph/en/students/admission-and-registration <p>The Emergency Medical Services program is following the University's academic bylaws, policies and procedures under the umbrella of the Ministry of Education. This process is fully automated through the Student Information System (SiS) and is governed by the Deanship of Admission and Registration (DAR) with the support of the Deanship of Student Affairs (DSA). Once the admission gate opens, applicants can submit their applications through the University website or the Ministry of Education's (MOE) unified admission gate. The admission criteria and requirements are available in the admission booklet and University social networks. The University's admission requirements include a Saudi nationality, recent high school certificate and a weighted score not lower than 90%. The weighted score is a ratio consists of high school achievement, general aptitude test grade, and of scholastic achievement grade.</p> <p>Upon admission, all students are enrolled into the first Pre-Professional Year as health sciences students. After the first year in Pre-Professional year they will be segregated into the program based on their cumulative grade point average (cGPA), and student's own preferences taking the program capacity into consideration.</p>
2. Guidance and Orientation Programs for New Students
<ul style="list-style-type: none"> At the beginning of every new academic year, KSAU-HS holds an orientation ceremony for its new students, organized by the Deanship of Student Affairs in cooperation with the College of Sciences and Health Professions. The College also provides guidance and orientation activities, including tour of the College programs, facilities, etc. The Department also includes an introductory tour in the College facilities as well as explanatory workshops to help students on how to overcome the obstacles and a simplified explanation of the use of academic and learning applications for students. Students are also provided with related handbooks which can be accessible online. For example: <ul style="list-style-type: none"> Students' Rights and Responsibilities Bylaws https://ksau-hs.edu.sa/English/Deanships/Dqm/Documnets/2017/05/Students-Rights_Bylaws-updated.pdf Study and Examination Bylaws https://ksau-hs.edu.sa/English/Deanships/Dqm/Documents/2017/05/Study-Examination-BylawsUpdated.pdf
3. Student Counseling Services (academic, career, psychological and social)

- Each faculty member will be assigned a group of students for counselling and advising. Every student will be required to meet his academic advisor at least twice per semester.
- Each faculty member will be asked to post his/her office hours during the semester which students can visit to receive counselling and advising.
- Well-student Center provides psychological support for all students to help them overcome academic life stress and difficulties. Additionally, it provides a suitable environment that inspires the personal and academic growth of students at all levels.

4. Special Support (low achievers, disabled, gifted and talented)

- The low achievers are required to attend a counseling session with their advisors within the program and the Chairman of the Department to reveal the problems and offer solutions.
- The College has an Associate Dean, an Assistant Dean for Students and Academic Affairs, and Student Affairs Unit responsible for enhancing student's life inside the College and supporting their educational, social, intellectual and personal development to prepare them to a thriving profession.
- Student Affairs team significantly provides a high level of academic and scientific services and contributes to the awareness of the students.
- Student Affairs team members guide the students throughout their academic lives and help them to solve problems which might hinder their educational journey.
- If a student has a documented disability (or need to have a disability documented), and need an accommodation, he/she should contact his/her Department as soon as possible, so that the Department can discuss how to meet his/her specific needs and the requirements of the course.
- Well-Student Center provides psychological support for all students to help them overcome academic life stress and difficulties.

7.0 Curriculum Structure:

Program Structure	Required/ Elective	No. of Courses	Credit Hours	Percentage
Institution Requirements	Required	15	36	25%
	Elective			
College Requirements	Required	15	34	24%
	Elective			
Program Requirements	Required	17	73	51%
	Elective			
Capstone Course/Project	NA	NA	NA	NA
Field Experience*/ Internship**	Required	NA	NA	NA
Others	NA	0	0	0
Total		47	143	100%

* Field Experience will be part of the program requirement.

** After completing the program requirements, structured 12 months supervised clinical internship is required for graduation.

8.0 Program Study Plan:

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
	ENGH 101	English	Required		3	

Level 1		Communication Skills				
	ENGH 102	English Grammar I	Required		3	
	ENGH 103	English Reading and Vocabulary	Required		2	
	ARBC 101	Arabic Language Skills I	Required		2	
	ISLM 101	Islamic Culture	Required		2	
		Total			12	
Level 2	ENGH 111	English Academic Writing for Health Sciences I	Required		4	
	ENGH 112	English Grammar II	Required		2	
	ARBC 102	Arabic Language Skills II	Required		2	
	CHEM 111	Chemistry for Health Sciences I	Required		2	
	PHYS 111	Physics for Health Sciences I	Required		2	
		Total			12	
Level 3	ENGH 113	English Academic Writing for Health Sciences II	Required		4	
	ENGH 114	English Grammar III	Required		2	
	CHEM 112	Chemistry for Health Sciences II	Required		2	
	PHYS 112	Physics for Health Sciences II	Required		2	
	BIOL 111	Biology for Health Sciences	Required		2	
		Total			12	
Level 4	ENGH 211	English Academic Writing for Health Sciences III	Required		3	
	TERM 211	Medical Terminology	Required		2	
	BIOS 211	Biostatistics	Required		2	
	RESC 211	Research Skills	Required		1	
	BCHM 211	Basic Biochemistry for Health Sciences	Required		3	
	IMMC 214	Microbiology & Immunology for Applied Medical Sciences	Required		2	
		Total			13	

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 5	BCHM 216	Advanced Biochemistry for Applied Medical Sciences	Required		2	
	BEHS 211	Behavioral Sciences	Required		2	
	COMP 211	Computer Science & Health Informatics	Required		3	
	ANAT 214	Anatomy for Applied Medical Sciences	Required		3	
	PHYG 214	Physiology for Applied Medical	Required		2	

		Sciences				
		Total			12	
Level 6	ETHC 211	Ethics for Health Care Profession	Required		1	
	AHPE 211	Applied Health Professions Education	Required		2	
	PAMG 214	Pathology and Molecular Genetics for Applied Medical Sciences	Required		3	
	PHRM 214	Pathology and Molecular Genetics for Applied Medical Sciences	Required		3	
	EMDS 201	Introduction to Emergency Medical Services	Required		2	
		Total			11	

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 7	EMDS 301	Paramedic Practice I and Communication for EMT	Required	None	6	Department
	EMDS 311	Paramedic Practice II	Required	EMDS 301	5	Department
		Total	Required		11	
Level 8	EMDS 312	Paramedic Practice III	Required	EMDS 311	5	Department
	EMDS 313	Pathophysiology of the Cardiovascular System	Required	EMDS 312	6	Department
	CAMS 301	Research Methodology I	Required	None	2	Department
		Total	Required		13	
Level 9	EMDS 314	Pathophysiology of the Respiratory System	Required	EMDS 313	6	Department
	EMDS 315	Applied Pharmacology	Required	EMDS 314	4	Department
	EMDS 316	Practical Field I	Required	EMDS 313	2	Department
		Total			12	
Level 10	EMDS 411	Pathophysiology of the Central Nervous System	Required	EMDS 314	5	Department
	EMDS 412	Mental Health & Mental Illness	Required	EMDS 411	3	Department
	EMDS 413	Practical Field II	Required	EMDS 316	4	Department
		Total	Required		12	
Level 11	EMDS 414	Pathophysiology of the Body Systems	Required	EMDS 412	5	Department
	EMDS 415	Hospital Rotation	Required	EMDS 413	7	Department
		Total			12	
	EMDS 416	Professional Studies System	Required	EMDS 415	2	Department
	EMDS 417	Applied Paramedic	Required	EMDS 414	7	Department

Level 12		Practice				
	CAMS 412	Research Methodology II	Required	CAMS 301	2	Department
		Total			11	

9.0 Course Description:

EMDS 301 - PARAMEDIC PRACTICE I AND COMMUNICATION FOR EMT
This block will equip those working as Paramedics with both theoretical and practical understanding of the Emergency Medical Services Systems. It will cover the basics of primary survey, secondary survey, resuscitation, patient examination and history taking, making judgments of life threats, communicating in the health care setting, providing medical handover and documentation.
EMDS 311 - PARAMEDIC PRACTICE II
This block will equip students working in the pre-hospital emergency care with foundations of knowledge to apply patient care in trauma situations. To develop knowledge and understanding of the resources available to assist a paramedic at a trauma scene.
EMDS 312 - PARAMEDIC PRACTICE III
This block will equip students working in the pre-hospital emergency care with foundations of knowledge to apply patient care in medical emergency situations. To provide the student with the understanding, recognition and management of medical emergencies at a basic level.
EMDS 313 - PATHOPHYSIOLOGY OF THE CARDIOVASCULAR SYSTEMS
This course has been developed to enable students to work as Primary Health Care providers. By providing extensive theoretical and practical understanding of the functional and dysfunctional integrity of the Cardiovascular System and it is relevant to the core practice of the professional Paramedic.
EMDS 314 - PATHOPHYSIOLOGY OF THE RESPIRATORY SYSTEM
This course has been developed to enable students to work as Primary Health Care providers. By providing extensive theoretical and practical understanding of the functional and dysfunctional integrity of the Cardiovascular System and it is relevant to the core practice of the professional Paramedic.
EMDS 315 - APPLIED PHARMACOLOGY
This block will build on Paramedics understanding of drug use and administration. Students will learn how drugs are chosen for particular effects. The pharmacological principles of pharmacokinetics, pharmacodynamics, adverse effects, contraindications and precautions will be described using examples from different drug classes.
EMDS 316- PRACTICAL FIELD I
This block has been developed to encourage students to work as pre-hospital health care providers.
EMDS 412 - MENTAL HEALTH & MENTAL ILLNESS
The aim of this block is to enable students to develop an awareness of and confidence in recognizing and responding to individuals with compromised mental health.
EMDS 413 - PATHOPHYSIOLOGY OF THE BODY SYSTEMS
This block has been developed to provide the student with the knowledge, skills and judgment to deliver pre-hospital emergency care. The broad nature of the block content is complementary to the range of health problems that Paramedics may encounter in their role as a primary Health Care Providers.
EMDS 414 - PRACTICAL FIELD II
This block has been developed to encourage students to work as pre-hospital health care providers.
EMDS 415 - HOSPITAL ROTATION
This block is essential in order to complete the requirements of the award. This block has been developed to enable students to work as Primary Health Care providers. It is intended that during

this block the students should be exposed to different areas of the Emergency Department especially adult, critical and pediatrics care areas, to do primary care for the patients, starting from assessment, giving medications (IM, IV, SQ, INHALED and PO), reassessments, monitoring and disposition.

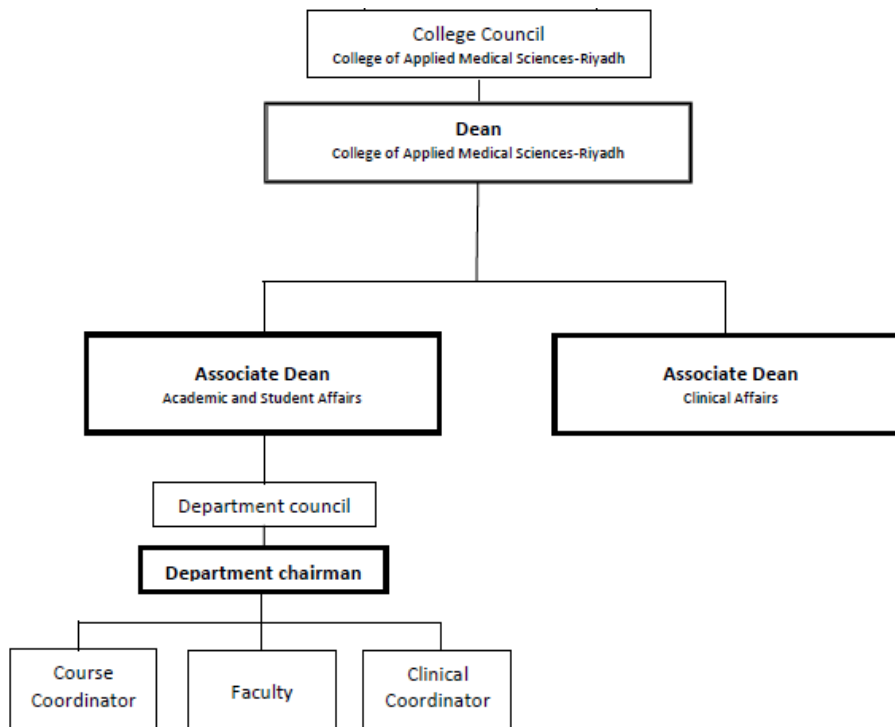
EMDS 416 - PROFESSIONAL STUDIES

This is a consolidation topic which is aimed at imbedding paramedic related knowledge, skills and professionalism, in order to support the transition from student to graduate with confidence and preparedness for their future career.

EMDS 417 - APPLIED PARAMEDIC PRACTICE

The delivery of the topic is increasingly graduated in intensity and complexity, ranging from a review of previously achieved clinical levels of practice in week 1, to the final weeks of the degree which witness the student demonstrating leadership and skill automaticity within challenging clinical, environmental and multi-patient scenarios.

10.0 Program Structure and Faculty:



11.0 Program Council and Committees:

EMDS COMMITTEES

Internship and Clinical Practice Committee

Chairman: Dr. Meshal Alharbi, Assistant Professor, EMDS Program, KSAU-HS

Members:

Dr Abdulrahman Alghamdi, Assistant Professor, EMDS Program, KSAU-HS

Dr. Abdullah Alshibani, Assistant Professor, EMDS Program, KSAU-HS

Mr. Abdulaziz Alghamdi, Paramedic, EMDS Program, KSAU-HS

EMDS Faculty Enhancement Committee

Chairman: Dr. Meshal Alharbi, Assistant Professor, EMDS Program, KSAU-HS

Members:

- Dr. Abdullah Alshibani, Assistant Professor, EMDS Program, KSAU-HS
- Dr. Meshary bin Hotan, Assistant Professor, EMDS Program, KSAU-HS
- Dr. Abdulrahman Alghamdi, EMDS Program Assistant Professor, KSAU-HS

Community Service and Students Activities

Chairman: Dr. Abdulrahman Alghamdi, Assistant Professor, EMDS Program, KSAU-HS

Members:

- Dr. Meshal Alharbi, Assistant Professor, EMDS Program, KSAU-HS
- Dr. Abdullah Alshibani, Assistant Professor, EMDS Program, KSAU-HS
- Dr. Meshary bin Hotan, Assistant Professor, EMDS Program, KSAU-HS
- Mr. Maree Alanazi, Lecturer, EMDS Program, KSAU-HS

EMDS Quality Committee

Chairman: Dr. Meshary bin Hotan, Assistant Professor, EMDS Program, KSAU-HS

Members:

- Dr. Abdullah Alshibani, Assistant Professor, EMDS Program, KSAU-HS
- Dr. Meshal Alharbi, Assistant Professor, EMDS Program, KSAU-HS
- Mr. Maree Alanazi, Lecturer, EMDS Program, KSAU-HS
- Dr. Abdulrahman Alghamdi, Assistant Professor, EMDS Program, KSAU-HS

Research Committee

Chairman: Dr. Abdullah Alshibani, Assistant Professor, EMDS Program, KSAU-HS

Members:

- Dr. Abdulrahman Alghamdi, Assistant Professor, EMDS Program, KSAU-HS
- Dr. Meshal Alharbi, Assistant Professor, EMDS Program, KSAU-HS
- Dr. Abdullah Alabdali, Associate Professor, EMDS Program, KSAU-HS
- Dr. Meshary bin Hotan, Assistant Professor, EMDS Program, KSAU-HS

12.0 Learning Resources, Facilities and Equipment:

1. Learning Resources

(textbooks, references and other resource materials, including electronic and web-based resources etc.)

- The campus libraries provide physical and online resources that include over 60 databases, 5000 books and 6200 e-journals access.

2. Facilities and Equipment

(Library, laboratories, medical facilities, classrooms, etc.)

- The College classrooms are equipped with smart boards, computers, microphones, and fast internet.
- The College library is well-established with all needed textbooks, e-journals and data bases.
- Students will have access to King Abdulaziz Cardiac Center – Riyadh and King Faisal Cardiac Center – Jeddah.

3. Arrangements to Maintain a Healthy and Safe Environment

(According to the nature of the program)

Students will be allocated under the supervision of emergency medical services team, Following policy and procedure in the hospital.

In the university following the university bylaw.

- Safety is a core value at KSAU-HS which is committed to continued advancement of an institutional safety culture with strong programs of personal safety, accident and injury prevention, wellness promotion, and compliance with applicable environmental and health and safety laws and regulations.
- Adherence to good health and safety practices and compliance with applicable health and safety

regulations are the responsibility of all faculty members, staff, and students. Line responsibility for good health and safety practice begins with the supervisors in the workplace, laboratory or classroom and proceeds upward through the levels of management.

- KSAU-HS reviews legislation, recommends policies, and monitors compliance with environmental and health and safety laws and regulations.
- KSAU-HS provides guidance and technical assistance to supervisors and managers in the Departments, and other work units in identifying, evaluating, and correcting health and safety hazards.
- KSAU-HS provides fire prevention, inspection, engineering and systems maintenance services, and hazardous waste management and disposal services.

Faculty, Staff and students are responsible for keeping themselves informed of conditions affecting their health and safety, participating in safety training programs as required by KSAU-HS policy and their supervisors and instructors, and adhering to health and safety practices in their workplace, classroom, laboratory and student campus residences.

13.0 Grading System and Grading Point Average (GPA):

Course grading system: It is the scale by which the final mark of each course is classified into a grade interval.

Course final mark: It is the total of all semester work marks such as midterms, projects, and assignments, practical and/ or class participation plus the mark of the final examination.

Semester GPA: It is the GPA calculated for the credit hours completed in one semester.

Cumulative GPA: It is the GPA calculated for the credit hours completed in all the semesters.

Grade Weight: It is a numeric worth assigned for grades that are included in the GPA calculations.

Every course that is officially registered for students must be given a grade by the instructor of the specific course according to the applied grading system.

14.0 Laboratory Safety Guideline:

The Safety department published the safety guide for KSAU_HS Laboratories: A Guide to Some Hazardous Substances to help staff and students identify hazardous substances that may be used in KSAU_HS laboratories and provide an inventory of these substances.

Because the new global harmonized system, the safety guide has been updated and revised to reflect those changes. This guide on safety in the chemistry laboratory was also written to provide staff and students with an easy-to-read reference to create a safe learning environment in the laboratory. The document attempts to provide lab responsible and ultimately their students, with information so that they can take the appropriate precautionary actions in order to prevent or minimize hazards, harmful exposures, and injuries in the laboratory.

The guide presents information about ordering, using, storing, and maintaining chemicals in the laboratory. The guide also provides information about chemical waste, safety and emergency equipment, assessing chemical hazards, common safety symbols and signs, and fundamental resources relating to chemical safety, such as Safety Data Sheets and Chemical Hygiene Plans, to help create a safe environment for learning. In addition, checklists are provided for both staff and students that highlight important information for working in the laboratory and identify hazards and safe work procedures. The guide also presents the bio hazard, radiation, and laser safety in the KSAU_HS Laboratories.

Web link for special safety procedures under COVID-19 situation are provided (page 65).

This guide is not intended to address most of the safety issues, but rather to provide basic information about important components of safety in the chemistry laboratory and to serve as a resource to locate further information. This manual is available online and also in the lab to all laboratory users. Links for more details about policies and procedures are provided below.

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