JAMIA HAMDARD

DEPARTMENT OF PARAMEDICAL SCIENCES

CBCS ENABLED SYLLABUS
BSc. TRAUMA CARE MANAGEMENT

SYLLABUS FOR BSC.

TRAUMA CARE MANAGEMENT

Choice Based Credit System (CBCS)
Approval Date: 24th September 2019

DEPARTMENT OF PARAMEDICAL SCIENCES
JAMIA HAMDARD
Deemed to be University
Accredited in 'A' Grade by NAAC
Declared to be designated as Institute of Eminence (IoE) by MHRD, GOI
NEW DELHI 110062
www.jamiahamdard.edu

PROGRAM NAME: BSc. Trauma Care Management
PROGRAM CODE: 406
ACADEMIC SESSION OF INTRODUCTION OF THE PROGRAMME: (2022-2023)
SCHOOL NAME: SNSAH
DEAPRTMENT NAME: DEPARTMENT OF PARAMEDICAL SCIENCES

APPROVAL DATE OF THE BOARD OF STUDIES (B.O.S) MEETING FOR THE PRESENT SYLLABUS **24TH September 2019**
APPROVAL DATE AND NUMBER OF ACADEMIC COUNCIL OF MEETING FOR THE PRESENT SYLLABUS **39th AC (26th September 2019)**

BSC TRAUMA CARE MANGEMENT

Program code: 406

JAMIA HAMDARD
(Deemed University)
Hamdard Nagar, NewDelhi-110062

Byelaws

Program Objective

Fundamental knowledge of principles of public health and epidemiology,including: public health emergencies, health promotion, and illness and injury prevention. knowledge of pharmacology. To understand a treatment plan intended to mitigate emergencies and improve the overall health of the patient. A thorough understanding of the techniques and abilities used in emergency medical care, as well as the capacity to objectively evaluate the evidence for their efficacy. Remember that all health-care personnel have a role to play in improving society's health and well-being. To remember practice, education, and research should all be used to advance emergency medical services. Perform as members of clinical teams and health-care systems, practise both individually and collectively. Perform in the Emergency Department, interpret commonly performed diagnostic procedures (EKG, radiologic studies, and laboratory studies) correctly.

Program Outcomes

After successful completion of the course, students will be able to:

a. Comprehensive knowledge of EMS systems, safety/well-being of the EMS provider, andmedical/legal and ethical issues, which is intended to improve the health of EMS personnel, patients, and the community.

b. Knowledge of anatomy, physiology and pathophysiology of an assessment, developmentand implementation of a treatment plan with the goal of assuring a patent airway, adequate mechanical ventilation, and respiration for patients of all ages.

c. Scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. This includes developing a list of differentialdiagnoses through clinical reasoning to modify the assessment and formulate a treatment plan.

d. Comprehensive anatomical and medical terminology and abbreviations within writtenand oral communication with colleagues and other healthcare professionals.

e. Application of fundamental knowledge of principles of public health and epidemiology,including: public health emergencies, health promotion, and illness and injury prevention.

f. Comprehensive knowledge of pharmacology to formulate a treatment plan intended tomitigate emergencies and improve the overall health of the patient.

Program Details

Semester-I

Course Code	Course Title	Sessional Marks	End Semester Marks	Total Marks	Allotted Credits
Theory					
101	Human Anatomy	25	75	100	2
102	Human Physiology	25	75	100	2
Practical					
103	Human Anatomy	25	75	100	1
104	Human Physiology	25	75	100	1
Qualifying Examination					
105	Medical Ethics, Legal aspects and Medical Terminology	13	37	50	0
106	English skills	13	37	50	0
107	Computer Skills	13	37	50	0

Semester-II

Course Code	Course Title	Sessional Marks	End Semester Marks	Total Marks	Allotted Credits
THEORY					
201	Fundamentals of Emergency Medical Care	25	75	100	2
202	Therapeutic communications & Human personality development	25	75	100	1

203	Emergency Diagnostic Measures	25	75	100	1
PRACTICAL					
204	Fundamentals of Emergency Medical Care	25	75	100	2
205	Emergency Diagnostic Measures	25	75	100	1
Qualifying examination					
EVS*	Environment science & health	25	75	100	0

Semester – III

Course Code	Course Title	Sessional Marks	End Semester Marks	Total Marks	Allotted Credits
THEORY					
301	PHARMACOLOGY	25	75	100	1
302	MEDICINE-1	25	75	100	1
303	MEDICINE-2	25	75	100	1
PRACTICALS					
304	PHARMACOLOGY	25	75	100	1
305	MEDICINE-1	25	75	100	2
306	MEDICINE-2	25	75	100	2

Semester – IV

Course Code	Course Title	Sessional Marks	End Semester Marks	Total Marks	Allotted Credits
THEORY					
401	TRAUMA-1	25	75	100	1
402	PATIENT ASSESSMENT AND DRUG ADMINISTRATION-1	25	75	100	1

403	PATIENT ASSESSMENT AND DRUG ADMINISTRATION -2	25	75	100	1
PRACTICALS					
404	TRAUMA-1	25	75	100	2
405	PATIENT ASSESSMENT AND DRUG ADMINISTRATION -1	25	75	100	2
406	PATIENT ASSESSMENT AND DRUG ADMINISTRATION -2	25	75	100	2

Semester – V

Course Code	Course Title	Sessional Marks	End Semester Marks	Total Marks	Allotted Credits
THEORY					
501	TRIAGING	25	75	100	1
502	TRAUMA-II	25	75	100	2
503	AMBULANCE FIELD OPERATION	25	75	100	2
PRACTICALS					
504	TRIAGING	25	75	100	2
505	TRAUMA-II	25	75	100	1
506	AMBULANCE FIELD OPERATION	25	75	100	1

Semester – VI

Course Code	Course Title	Sessional Marks	End Semester Marks	Total Marks	Allotted Credits
601	Submission of assignment & viva voce	25	75	100	30

Course Description:

Semester I
Theory
GFC-101 Human Anatomy
GFC-102 Human Physiology
Practical
GFC-103 Human Anatomy
GFC-104 Human Physiology
Qualifying Exam
GFC- 105 Medical Ethics, Legal aspects and Medical Terminology
GFC- 106 English skills
GFC- 107Computer Skills

Semester II
Theory
BEMT-201 Fundamentals of Emergency Medical Care
BEMT-202 Therapeutic communications & Human personality development
BEMT -203 Emergency Diagnostic Measures
Practical
BEMT-204 Fundamentals of Emergency Medical Care
BEMT -205 Emergency Diagnostic Measures
Qualifying Exam
EVS Environmental Science & Health

Semester III
Theory
BEMT -301Pharmacology
BEMT -302 Medicine -I
BEMT -303 Medicine-II
Practical
BEMT -304Pharmacology
BEMT -305 Medicine -I
BEMT -306 Medicine-II

Semester IV
Theory
BEMT -401 Trauma-I
BEMT -402 Patient Assessment & Drug administration-I
BEMT -403 Patient Assessment & Drug Administration-II
Practical
BEMT -404 Trauma-I
BEMT -405 Patient Assessment & Drug administration-I
BEMT -406 Patient Assessment & Drug Administration-II
Semester V
Theory
BEMT -501 Triaging
BEMT -502 Trauma-II
BEMT -503 Ambulance Field Operations

Practical
BEMT -504 Triaging
BEMT -505 Trauma-II
BEMT -506 Ambulance Field Operations

Semester VI

BEMT-601 Submission of Assignment & viva voce

Compulsory one-year Internship

Vision
To create an institute of national and international repute in Paramedic offering state of the art education entailing the finest skills combined with compassionate patient care.

Mission
The emergency program provides the community with educated, registry-eligible, professionally competent, entry-level paramedics. The program provides the student with didactic learning activities in general studies and emergency medicin studies, as well as clinical learning and application experiences validated by clinical competency processes and standards

The Course

Highlights of the course are described in the following table:

a.	Name of the Course	BSc. IN TRAUMA CARE MANAGEMENT
b.	Nature	Regular
c.	Duration	3 year +1 Year (compulsory rotatory internship included) = 4years
d.	Medium of Instruction and Examinations	English
e.	**Eligibility Criteria**	
	Educational Requirements	Eligibility for the admission : must have passed in 10+2 or equivalent qualification with any discipline from a recognized institution with 50% aggregates
f.	Commencement of the course	July of every year

h.	Mode of Admission	Admission to the course will be made on the basis of the merit determined by the score of CET conducted by Jamia Hamdard. Students who have appeared in NEET after interview can also be given admission. For admission against the foreign national/NRI/Industry sponsored seats, students will be required to appear only in interview conducted by Jamia Hamdard.
i.	Period of Completion (Span Period)	Not more than 06 years
J.	Fees	As per university norms.
k.	Total Number of Students per year	25
l.	Total number of Semesters and examinations	Six Semesters and Semester Examination in every December and May
m .	Total Theory Papers	14 Theory papers (100 marks) Exam -75 Marks/ Internal - 25 Marks + 01(100 marks) project + 01 (100marks) Assignment +04 qualifying exams
n.	Total credits	(One credit hour is equal to 15 hours of teaching for theory as well as practical. Credits for theory given against the subject in the course syllabus)
o.	Minimum Average Pass Marks	50% in each subject, Grade C

Course design

(a) The course work shall be divided into three parts as given below:

Part-I	Semester-I	July to mid December
	Semester-II	January to mid May
	SUMMER TRAINING	mid May to mid July (two months)
Part-II	Semester-III	July to mid December
	Semester-IV	January to mid May
Part III	Semester V	July to mid December
	Semester VI	Assignment

1year compulsory internship

(b) During an academic year, a candidate shall be enrolled only for one course of study and shall not appear at any other examination of this or any other University.

(c) The semester-wise course outline, total marks allocated to each course, internal assessment and semester examinations marks for all specialization are Listed.

Detailed course content of the syllabus shall be prescribed by the Board of Studies (BOS) and shall be reviewed periodically.
Every candidate shall have to undergo eight weeks summer training in an organization of repute in India or abroad. The project for the summer training shall be assigned by the organization concerned.

The BOS, depending on circumstances prevailing in the market, may change any paper and increase or decrease the number of optional papers.

1. Attendance

a) All students must attend every lecture delivered, however, to account for the late joining or other such contingencies, the attendance requirement for appearing in the semester examinations shall be a minimum of 75% of the total classes actually held.
b) In order to maintain the attendance record of a course, a roll call will be taken by the teacher in every scheduled lecture.
c) Attendance on account of participation in the prescribed functions of NCC, NSS, Inter-University sports, educational tours/field work assigned by the university to students shall be credited to the aggregate, provided the attendance record, duly counter signed by the officer in-charge, is sent to the Head of Department within two weeks time after the function/activity.
d) The teacher in-charge will consolidate the attendance record for the lectures for each student. The statements of attendance of students shall be displayed on the Department's Notice Board by the teacher concerned at the beginning of the following month and consolidated attendance before the conclusion of each semester as given in the University Calendar. A copy of the same shall be sent to the Head of Department for record. Notices displayed on the Notice Board shall be deemed to be a proper notification, and no individual notice shall be sent to students.
e) If a student is found to be continuously absent from the classes without information for a period of 30 days, the teacher in charge shall report it to the Head of Department, who will inform the Registrar through the Dean. Registrar will issue a notice to such student, as to why his/ her admission should not be cancelled. The Registrar will take a decision on cancellation of admission within 30 days of issue of the notice. A copy of the order shall be communicated to the student.
f) A student with less than 75% attendance of the lectures in each course shall be detained from appearing in the semester examination of that course. The Dean of Faculty concerned may consider application for the condonation of shortage of attendance up to 5% on account of sickness or any other extra ordinary circumstances, provided the medical certificate duly certified by

registered Medical Practitioner, had been submitted within 7 days of the recovery from the illness.

g) A student detained on account of attendance will be re-admitted to the same class in the next academic year on payment of current fees except Enrolment and identity card fees

2. Scheme of Examination

Each theory course shall carry 100 marks. Of these, 75 marks shall be for semester examination and 25 marks for internal assessment.

The candidate shall have to make an oral presentation of his/ her summer training report before a joint session of the faculty and students. Presentation of report shall carry 40 marks. The same report shall be examined by an internal examiner out of 60 marks. The total summer training shall carry 100 marks.

3. Internal Assessment

Internal assessment for 25 marks in respect of theory papers will be based on written tests, assignments, presentations, viva-voice etc.

- The evaluation shall be done by course instructors and marks will be notified within a week of such test.
- There shall be two written tests in each course in a semester. The test will be conducted as per the academic calendar individual faculty member to announce the date for tests or conduct them as per academic calendar.
- The teacher concerned shall maintain records of marks of various components of evaluation for each student and the same will be confidential and notified at the end of the semester.
- The internal assessment marks shall he submitted by head of the Department to the Registrar at the end of the semester.
- A candidate who has to reappear (as an ex-student) in the semester examination of a course will retain the marks of internal assessment.
- A student who will be required to seek re-admission, for whatever reason, will have to appear for internal assessment and tests afresh

9. Semester Examinations

a) The Semester examinations shall be held at the end of each semester as notified in the academic calendar. There shall be no supplementary examination. Candidates shall appear in the examination of their uncleared papers in the next semester examination of the same paper along with other students of junior batch. Thus, the uncleared papers of Semester - I shall be cleared in Semester- III and those of Semester - II in Semester-IV. Likewise, the examination of uncleared papers of semester V and VI would be taken up by the student next year along with the junior batch.

b) The duration of semester examinations of each theory paper will be 3 hours.

c) The question papers shall be set by either an external or an internal examiner duly appointed by the Board of Studies and approved by the Vice Chancellor.

d) The papers set by the examiners shall be moderated by a panel of moderators constituted by the Board of Studies at the time of approving the panel of examiners.

e) Upon completion of the training, the training report has to be submitted in duplicate immediately on joining the third semester.

f) Evaluation of the summer training report for 60 marks shall be done by a panel comprising an external examiner and teacher in charge on the basis of presentation and viva-voce.

g) Any student who fails to defend his /her training report satisfactorily shall have to undergo training afresh in the following year and defend it in similar manner as laid down in Para 9 (f).

h) All students shall be required to be present at the time of presentation. Their attendance will be taken into account while awarding marks for presentation.

i) Every candidate shall have to prepare a project study / assignment in the Sixth semester. The subject of project/assignment shall be approved on the recommendations of the supervisor(s) and the Head of the Department.

j) A student shall be required to maintain record of periodic progress in the project in a diary. He / she should be in constant touch with his/her supervisor and obtain his/her signature in the diary regularly. There would be continuous appraisal of the project which will carry' 25 marks as a part of internal assessment and remaining 75 marks will be given by external examiner.

k) The minimum pass marks shall be 50% (grade E) in each theory/ assignment and viva-voce (combined examination).

10. Promotion Criteria

a) A student shall be promoted to semester-III if he/she has secured at least 50% marks each in at least 10 subjects out of 14 prescribed in Semester - I and Semester - II taken together.

b) No student shall be promoted to Semester V if he/she has more than 04 uncleared papers of the preceding semesters taken together.

c) After the declaration of the semester-VI results, if a student has any paper uncleared of any semester, he/ she will have to reappear in these papers in concerned semester in next academic year as an ex-student along with the next batch.

d) The degree will be granted only after clearing all the semester examination and completion of six months compulsory internship from the parent institution or in extraordinary circumstances from a government hospital after taking permission from the head of the departments of the concerned hospitals

e) For all the papers labeled as qualifying exams the student needs to clear these papers during the span period to be awarded the degree

11. Span Period

A student must complete all the requirements of degree within a period of Six years from his/ her admission.

Grading System

The grade awarded to a student in any particular course will be based on his/her performance in sessionals and final examinations combined together. The letter grades and their equivalent numerical points are listed below:

% Of Marks Scored	Grade	Grade Points	Description of Performance
80% or more	A+	10	Outstanding
75% or more but less than 80%	A	9	Excellent
70% or more but less than 75%	B	8	Good
60% or more but less than 70%	C	7	Average
50% or more but less than 60%	D	6	Marginal
45% or more but less than 50%	E	5	Fail
Absent/ Detained	I	-	Incomplete

Earned Credit (E C)

The credit for the course in which a student has obtained D or a higher grade will be counted as credits earned by him/ her. Any course in which a student has obtained I grade will not be counted towards his/ her earned credits

Evaluation of Performances

- SGPA (Semester Grade Point Average) will be awarded on successful completion of each semester
- CGPA (Cumulative Grade Point Average) which is the grade point average for all the completed semester at any point in time, which will be awarded in each semester on successful completion of the current semester as well as all of the previous semester. CGPA is not applicable in semester I.

Calculation of SGPA and CGPA in a semester $\sum_{I}$ (Earned Credits x Grade Point)

$$\textbf{SGPA} = \frac{\sum_{I}^{n} \text{(Earned Credits} \times \text{Grade Point)}}{\text{(Course Credits Registered)}}$$

I = Where n is the number of subjects/papers registered

$$\textbf{CGPA} = \frac{\sum_{I}^{m}\sum_{I}^{n} \text{(Earned Credits X Grade Point)}}{\sum_{I}^{m} \text{(Course Credits Registered)}}$$

Where m is the number of semester passed

For Example

Semester - I

Course name	Subject Credits	Marks	Grade Awarded	Grade Point	Points secured (Subject credits x grade point)
101	3	56	D	6	18
102	3	65	C	7	21
103	3	55	D	6	18
104	3	68	C	7	21
105	3	62	C	7	21
TOTAL	**15**	306		**33**	**99**

Total credits = 15
Points secured= 99
SGPA =99/15 = 6.6

Classification of successful candidates:

The result of successful candidates who fulfill the criteria for the award of degree shall be classified at the end of last semester, on the basis of his/her CGPA
Classification shall be done on the basis following criteria: -

- He/ she shall be awarded Distinction if her/ his final CGPA is 9 and above and passed all the semester examinations in the first attempt
- He/ she shall be awarded First Division if her/ his final CGPA is 6.75 and above but less than 9.00
- He/ she shall be awarded Second Division if her/ his final CGPA is 6.00 and above but less than 6.75.
- He/ she shall be awarded Pass if her/ his final CGPA is 5.00 and above but less than 6.00
- He / she shall be treated as Fail if his/ her final CGPA is less than 5.00

JAMIA HAMDARD, NEW DELHI - 110062

Internal Quality Assurance Cell (IQAC)

UGC – LEARNING OUTCOMES-BASED CURRICULUM

BSC IN TRAUMA CARE MANAGEMENT

PROGRAME CODE-406

JAMIA HAMDARD, NEW DELHI - 110062
Internal Quality Assurance Cell (IQAC)

Vision Statement:
To create an institute of national and international repute in Paramedic offering state of the art education entailing the finest skills combined with compassionate patient care.

Mission Statements:
MS1: To provide a quality paramedical education and prepare human and competent global Paramedic professionals.

MS 2: To provide highest level of quality patient care and can make contribution towards education and research.

MS 3: To provide the most advanced and comprehensive course offerings to health sciences students possible by employing the most qualified faculty, utilizing the most advanced technology.

DEPARTMENT OF PARAMEDICAL SCIENCES

Vision Statement (Department/Centre Level):
Academic excellence in education, research, and health care by grooming into highly skilled health professionals and faithful experts fully committed to serve the society.

Mission Statements (Department/Centre Level):

MS1: To impart basic, theoretical, practical, and professional knowledge of high quality for overall holistic growth of every student.

MS 2: To develop innovative educational activities and participate in public health reforms through training, research and intervention in the field of allied health sciences.

MS 3: To strive to uphold a future generation with high academic standards.

Name of the Academic Program: BSC IN TRAUMA CARE MANAGEMENT

QUALIFICATION DESCRIPTORS (QDs)

Upon the completion of Academic Programme ,

- **QD-1** Knowledge of EMS systems, safety/well-being of the EMS provider, andmedical/legal and ethical issues, which is intended to improve the health of EMS personnel, patients, and the community.

- **QD-2** Knowledge of anatomy, physiology and pathophysiology of an assessment, developmentand implementation of a treatment plan with the goal of assuring a patent airway, adequate mechanical ventilation, and respiration for patients of all ages.

- **QD-3** Learning how scene can be assessed and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. This includes developing a list of differentialdiagnoses through clinical reasoning to modify the assessment and formulate a treatment plan.

- **QD-4** Remember anatomical and medical terminology and abbreviations within writtenand oral communication with colleagues and other healthcare professionals.

Mapping Qualification Descriptors (QDs) with Mission Statements (MS)

	MS-1	**MS-2**	**MS-3**
QD-1	2	1	2
QD-2	2	2	2
QD-3	3	2	3
QD-4	2	2	1

3’ for ‘High-level’mapping, 2 for ‘Medium-level’mapping, 1 for ‘Low-level’mapping.

SCHOOL OF NURSING SCIENCES AND ALLIED HEALTH

Name of the Academic Program BSC IN TRAUMA CARE MANAGEMENT

PROGRAM LEARNING OUTCOMES (PLOs)

After completing this Course, the students should be able to :

After completing this Course, the students should be able to

- **PLO-1-** Fundamental knowledge of principles of public health and epidemiology,including: public health emergencies, health promotion, and illness and injury prevention.
- **PLO-2-** knowledge of pharmacology
- **PLO-3-** To understand a treatment plan intended to mitigate emergencies and improve the overall health of the patient.
- **PLO-4-**A thorough understanding of the techniques and abilities used in emergency medical care, as well as the capacity to objectively evaluate the evidence for their efficacy.
- **PLO-5-** Remember that all health-care personnel have a role to play in improving society's health and well-being.
- **PLO-6-** To remember practice, education, and research should all be used to advance emergency medical services.
- **PLO-7-**Perform as members of clinical teams and health-care systems, practise both individually and collectively.
- **PLO-8-** Perform in the Emergency Department, interpret commonly performed diagnostic procedures (EKG, radiologic studies, and laboratory studies) correctly.

PROGRAM SPECIFIC OUTCOMES (PSOs)

After completing this Course, the students should be able to:

- **PSO-1**- know how to assess the nature and severity of the patient's condition or extent of injuries to determine whether emergency medical care is required, provide appropriate medical care based on the assessment findings of the patient's condition, lift, move, position, and otherwise handle the patient to minimise discomfort and prevent further injury.
- **PSO-2**- know the roles and responsibilities of a paramedic in an EMS system, as well as basic development, pathophysiology, and pharmacology concepts in the assessment and management of emergency patients.
- **PSO-3-**able to understand how to safely administer medications and communicate effectively with patients, peers, and healthcare providers.
- **PSO-4-** understand thoughts and ideas effectively in writing and orally, communicate with others using appropriate media, confidently share one’s views in a clear and concise manner to different groups.

- **PSO-5-**Have the ability to perform the reliability and relevance of evidence, identify logical flaws in the arguments of others, analyse and synthesize data from a variety of sources, and draw valid conclusions.
- **PSO-6-** Able to perform the sense of inquiry and capability for asking relevant/appropriate questions; the ability to recognise cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses,

Mapping of Program Learning Outcomes (PLOs)
With Qualification Descriptors (QDs)

	QD-1	QD-2	QD-3	QD-4
PLO-1	**2**	**1**	**2**	**3**
PLO-2	**2**	**2**	**2**	**2**
PLO-3	**2**	**3**	**2**	**2**
PLO-4	**2**	**1**	**3**	**2**
PLO-5	**2**	**2**	**2**	**2**
PLO-6	**2**	**3**	**2**	**2**
PLO-7	**1**	**2**	**3**	**1**
PLO-8	**3**	**2**	**2**	**2**
PSO-1	**1**	**2**	**1**	**2**
PSO-2	**2**	**3**	**2**	**3**
PSO-3	**2**	**2**	**2**	**2**
PSO-4	**2**	**2**	**2**	**1**
PSO-5	**1**	**2**	**2**	**2**
PSO-6	**3**	**2**	**2**	**2**

SEMESTER-I

SCHOOL OF NURSING SCIENCES AND ALLIED HEALTH

Name of the Academic Program – BSC IN TRAUMA CARE MANAGEMENT

Course Code: 101(Theory) & 103(Practical)

Title of the Course: Human Anatomy

L-50

P-20

Credits (L=2, P=1): 3

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to

- **CLO-1-** Know the biology concerned with the study of the body structure of organisms and their parts.
- **CLO-2-** Learn the different parts of the human body
- **CLO-3-** Understand the Preservation, and, embalming of body organs
- **CLO-4-** Remember the study of bones, joints ,and muscles
- **CLO-5-** perform to make general slides of tissues & organs

Mapping of Course Outcomes (COs) with Program Learning Outcomes (POs) and Program Specific Outcomes (PSOs)

	PLO1	**PLO2**	**PLO3**	**PLO4**	**PLO5**	**PLO6**	**PLO7**	**PLO8**	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**	**PSO6**
CLO1	1	1	1	2	2	1	1	1	2	1	1	1	2	1
CLO2	1	1	1	1	1	2	2		1	1	1	1	1	
CLO3	1	1	3	2	1	1	1	1	1	2	2	1	2	1
CLO4	1	2	1	2	1	1		1	1	2	2	1	2	1
CLO5	1	1	1	2	2	1	1	1	2	1	1	1	2	1

Detailed Syllabus:

UNIT-I

12 Hours

Introduction to Anatomy
Anatomical terms, planes, organization of human body- cell, tissue, organ & organ system.
Musculo-skeletal system:
Types of bones, structure & divisions of the skeleton system, name of all the bones and their parts, joints- classification. Structure and types of muscles
Anatomy of the Nervous system
Central nervous system & Peripheral nervous system- different components

UNIT-II

15 Hours

Anatomy of Circulatory system:
General plan of circulatory system and its components-
Heart- size, location, coverings, chambers, blood supply, nerve supply, the blood vessels
General plan of circulation, pulmonary circulation
Name of arteries and veins and their positions Lymphatic system - general plan Anatomy of the Respiratory system:
Organs of Respiratory System (Brief knowledge of parts and position)

UNIT-III

13 Hours

Anatomy of the Digestive system:
Anatomy of alimentary tract; Parts of the tract
Accessory glands of digestion; Pancreas, Liver, Gall Bladder
Anatomy of Excretory system Kidneys- location, gross structure, excretory ducts, ureters, urinary bladder, urethra

UNIT-IV

10 Hours

Reproductive system
Male Reproductive System
Female Reproductive System Anatomy of the endocrine system
Name of all endocrine glands their positions, Hormones and their functions- Pituitary, Thyroid, Parathyroid, Adrenal glands, Gonads & Islets of pancreas

Reference Books:

1. Human Anatomy Regional and Applied Vol. 1, Vol.2 & Vol.3, B.D.Chaurasia C.B.S.Publishers, New Delhi
2. Hand Book of General Anatomy B.D.Chaurasia, C.B.S.Publishers, New Delhi
3. Text Book of Human Histology Inderbir Singh, Jaypee Brothers, Medical Publishers, Delhi
4. Gray s Anatomy Susan Standring, Elsevier Churchill Livingstone, Edinburg

GFC-103, HUMAN ANATOMY (Practical)

Practical based on the topics mentioned in the theory syllabus

Teaching-Learning Strategies

Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.

Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.

ASSESSMENT

Different assessment scales are used like internal assessment, external assessment, seminars.

Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)

Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)

Course Code: 102(Theory) & 104(Practical)

Title of the Course: Human Physiology

L-50

P-20

Credits (L=2, P=1): 3

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to .

- CLO-1-know how to assess Blood pressure, heart rate, pulse rate, respiratory rate, reflexes.
- CLO-2- understand the bleeding time and clotting time
- CLO-3-Remember the count of RBC, WBC, Platelet count
- CLO-4- Remember Blood Groups - ABO and RH grouping estimation
- CLO-5- Perform Hemoglobin test

Mapping of Course Outcomes (COs) with Program Learning Outcomes (POs) and Program Specific Outcomes (PSOs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	1	1	1	2	2	1	1	1	2	1	1	1	2	1
CO2	1	1	1	1	1	2	2	1	1	1	1	1	1	1
CO3	1	1	1	2	1	1	1	1	1	2	2	1	2	1
CO4	1	1	1	2	1	1	1	2	2	1	2	2	1	1
CO5	2	1	1	1	1	2	1	2	1	1	1	1	2	2

Detailed Syllabus:

UNIT-I

12Hours

General Physiology
Cell, Transport across cell membrane, homeostasis, resting membrane potential, action potential
Blood
Composition and functions of Blood
RBC, WBC, Platelet count, Hemoglobin
Blood Groups - ABO and RH grouping
Hemostasis & Anticoagulants

UNIT-II

15 Hours

Cardio vascular system
Cardiac muscle, Pacemaker & conducting tissue
Cardiac Cycle
Cardiac output, Heart rate, ECG
Arterial blood pressure
Respiratory System
Functions of Respiratory system
Mechanism of respiration, lung volumes & capacities

UNIT-III

13 Hours

Nerve & Muscle physiology
Neuron structure & properties
Neuromuscular junction
Skeletal muscle structure mechanism of contraction
Cerebrospinal Fluid (CSF): Composition, functions & Circulation.
Central & autonomic Nervous system Organization of CNS
Functions of various parts of Brain, in brief
Composition, functions and circulation of CSF
Differences between sympathetic and parasympathetic division

UNIT-IV

10 Hours

Digestive system
Functional Anatomy, organization & innervations
Composition and functions of all Digestive juices
Digestion & Absorption of carbohydrates, proteins and fats
Excretory System
Kidneys: Functions, Nephron, Juxta-glomerular Apparatus
Renal circulation
Mechanism of Urine formation
GFR
Endocrine and Reproductive systems Endocrine glands & hormones secreted
Functions of Reproductive system
Male Reproductive System: spermatogenesis, Testosterone.
Female reproductive system: Ovulation, Menstrual cycle.
Pregnancy test

GFC-104, HUMAN PHYSIOLOGY (Practical)
Practical based on the topics mentioned in the theory syllabus

Books recommended

1.Text book of Guyton (Arthur C) Prism Publishers Bangalore.

2.Review of medical Ganong Appleton and Physiology, Lange.

Teaching-Learning Strategies

Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.
Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.

ASSESSMENT

Different assessment scales are used like internal assessment, external assessment, seminars.
Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)
Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)

Course Code: 105

Title of the Course: Medical Ethics, Legal aspects and Medical Terminology

L-5

Credits: NA (Qualifying Exam)

(L=Lecture hours)

COURSE LEARNINGOUTCOMES (CLOs)

After completing this Course, the students should be able to
CLO-1: Know about the Ethical, Moral, and Legal responsibilities
CLO-2: Learn their roles as health care professionals.
CLO-3: Understand the principles of medical ethics
CLO-4: Uphold their responsibilities with dignity in a medical profession
CLO-5: Accomplish their assigned tasks in their clinical rotations.

Mapping of Course Outcomes (COs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CLO1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CLO2	1	1	1	1	1	1	1	1	1	1	1	1	1	2
CLO3	1	1	1	1	1	1	1	1	1	1	1	1	1	2
CLO4	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CLO5	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Detailed Syllabus:

15 HOURS

Role Definition and Interaction, Ethical, Moral, and Legal Responsibilities
Medical terminology- The course employs a body systems-oriented, word-analysis approach to learning medical terminology. The goal of the class is to prepare students for the terminology they might encounter in their subsequent coursework, in their clinical rotations and ultimately in their roles as health care professionals.

BOOKS RECOMMENDED

1. CM FRANCIS MEDICAL ETHICS,GUPTA AND RIMPI ,4TH EDITION, JAYPEE BROTHERS

Teaching-Learning Strategies
Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.

Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.

ASSESSMENT

Different assessment scales are used like internal assessment, external assessment, seminars.
Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)

Course Code: 106

Title of the Course: English

L-25

Credits: NA (Qualifying Exam)

(L=Lecture hours)

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to
CLO-1: Speak and write proper English
CLO-2: Read and understand English
CLO-3: Understand and practice medical terminology
CLO-4: Acquire a good command over English
CLO-5: Apply commonly used medical terminology in medical practice.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CLO1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CLO2	1	1	1	1	1	1	1	1	1	1	1	1	1	2
CLO3	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CLO4	1	1	1	1	1	1	1	1	1	1	1	1	1	
CLO5	1	1	1	1	1	1	1	1	1	1	1	1	1	1

BOOKS RECOMMENDED

1. PROFESSIONAL ENGLISH, MEENAKSHI RAMAN, OXFORD PUBLICATION

Teaching-Learning Strategies

Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.
Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.

ASSESSMENT

Different assessment scales are used like internal assessment, external assessment, seminars.
Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)

Course Code: 107

Title of the Course: Computer Skills

L-5

P-30

Credits: NA **QUALIFYING EXAM****

COURSE LEARNING OUTCOMES (CLOs)

CLO-1: Know about basics of computer application
CLO-2: Perform computer applications related to medical records and information system.

Mapping of Course Outcomes (COs) with Program learning Outcomes (POs) and Program Specific Outcomes (PSOs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CLO1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
CLO2	1	1	1	1	1	1	1	1	1	1	1	1	1	1

BOOKS RECOMMENDED

1. TRB A GUIDE FOR COMPUTER ,DR P.KRISHNAPRIYA,ABHYAM PUBLISHERS

Teaching-Learning Strategies

Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.
Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.

ASSESSMENT

Different assessment scales are used like internal assessment, external assessment, seminars.
Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)

SEMESTER-II

Name of the Academic Program Bsc in trauma care management

Course Code: BEMT-201 (Theory) & BEMT-204 (Practical)

Title of the Course Fundamentals of EmergencyMedical Care

L-40

P-50

Credits- L-2, P-2

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to

- CLO-1-Know how he/she can appropriately manage plans for patients and monitor patient response to therapy and follow up on all studies ordered ina timely fashion.
- CLO-2-Understand adequate social history in patient evaluation.
- CLO-3-Perform accurate and succinct case presentations in a clear, concise and organized fashion and appropriately document such information.

Mapping of Course Outcomes (COs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CLO1	1	1	1	2	2	1	1	1	2	1	1	1	2	1
CLO2	1	1	1	1	1	2	2	1	1	1	1	1	1	1
CLO3	1	1	1	2	1	1	1	1	1	2	2	1	2	1

Detailed Syllabus
BEMT 201, FUNDAMENTALS OF EMERGENCY MEDICAL CARE

UNIT-I

10 hours

Emergency Medical Services:
Definition & Overview of Emergency Medical Services System, Regulation and Policy Resource management, human Resources and training.
Transportation facilities, Communications, Public information and Education Access to the system, medical direction and trauma Systems
Roles and Responsibility of the Emergency Medical Technician:
Personal attitude and conduct of the EMT
Emotional reactions – when faced with trauma, illness, death and dying
Approach to the family member confronted with death and dying.
Critical Incident Stress Debriefing (CISD)
Stressful situation, Stress management
Baseline Vital Signs:

Components of vital signs and the importance of accurately reporting and recording
Methods to obtain – Respiratory rate, Pulse, Blood Pressure, Temperature
Abnormal skin colors and conditions, methods to assess the pupils
Interpretation of the assessment – Inspection, Auscultation, Palpation
Components of sample history – General information, Baseline vital signs, Assessment of the skin
Pupils, Vital Sign reassessment, sign and symptoms

Lifting and Moving patients:

Body mechanics
Guidelines and safety precautions that need to be followed when lifting, moving a patient and/or equipments
Safe lifting of cots and stretchers, types of equipment & Correct and safe carrying techniques.
Principles of Moving patients, patient carrying devices, transferring patients
Emergency moves, Urgent moves, Non-urgent moves
Patient Positioning with different conditions

UNIT-II

10hours

First aid: Introduction, First Aid Kit, Common conditions, Special Conditions

Introduction, First Aid Kit
Common Conditions
Special Conditions

Scene Safety:

Body substance isolation (BSI)
Patient's safety
Personal protection
The personal Protective Equipment necessary
Hazardous material
Rescue Operations
Violent scenes
Crime scenes
Exposure to blood borne pathogens
Exposure to airborne pathogens

Sample History:

Allergies, Medications, Pertinent past history
Last oral intake, Events leading to injury etc

UNIT-III

10 hours

Medical, Legal and Ethical Issues:

Scope of practice – Legal duties to the patient, Medical Director, and Public, Ethical responsibilities
Definitions of:

- Consent
- Assault/Battery
- Refusal
- Abandonment
- Negligence
- Confidentiality

Special situation – Donor / Organ harvesting consideration

Medical identification insignia – bracelet, necklace, cord etc
Serious medical condition of the patient such as diabetes, Epilepsy and others
Potential crime scene/Evidence preservation
Special reporting Situations – Abuse, Crime, Infectious, diseases exposure patient restraint laws, mentally incompetent etc

Communication:
Components of communication system
Radio communications, Communication with medical direction, Verbal communication Interpersonal communication
Documentation:
Components of documentation, written report
Special considerations regarding patient refusal, legal implications of the report
Special reporting situation, report of pre hospital care

UNIT-IV

10 hours

Common problems in infants and children
Airway obstruction
Respiratory emergencies
Seizures
Altered mental status – Caused by a variety of conditions
Poisonings
Fever
Shock – Common – Diarrhoea and Dehydration, Trauma, Vomiting.
Blood loss, Infection, Abdominal injuries
Uncommon – allergic reactions, Poisoning
Near Drowning
Sudden Infant Death Syndrome (SIDS)
Infants and Children with Special Needs:
Premature babies
Babies and children with heart disease
Infants and children with neurological disease
Children with chronic disease or altered function from birth
Pediatric Emergencies:
Identify the developmental considerations for _ Infants, Toddlers, pre-school, School age adolescent.
Describe differences in anatomy and physiology of the infant, child and adult patient.
Differentiate the response of the ill or injured infant or child (age specific) from that of adult.
Differentiate between the injuries patterns in adults, infants, and children.
Field management of the infant and the child trauma patient
Child abuse and neglect – indicators, management, medical legal responsibilities
Infant and Child transport – Special considerations and difficulties in lifting and moving techniques

BEMT-204, FUNDAMENTALS OF EMERGENCY MEDICAL CARE (Practical)
Practical based on the topics mentioned in the theory syllabus

50 hours

Teaching-Learning Strategies

Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.
Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.
Different assessment scales is used like internal assessment, external assessment, seminars and different type of quiz.

Books for Reference:

1. Nancy Caroline's Emergency care in streets (7^{th} Edition) AAOS publication
2. Advanced Emergency care and transportation of the sick and injured (2^{nd} Edition) AAOS publication

ASSESSMENT

Different assessment scales are used like internal assessment, external assessment, seminars.
Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)
Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)

Course Code: BEMT-202

Title of the Course- Therapeutic communications & Human personality development

L-30

Credits- L-1

- **COURSE LEARNING OUTCOMES (CLOs)**

- CLO-1-Learn the ability to efficiently, professionally, and effectively communicatewith patients, families and colleagues.
- CLO-2-Understand the sensitively with patients andtheir families in a culturally appropriate manner.
- CLO-3-At the completion of this unit, the paramedic student will be able to integrate and remember the principles of therapeutic communication to effectively communicate with any patient while providing care

Mapping of Course Outcomes (COs) with Program Outcomes (POs) and Program Specific Outcomes (PSOs)

	PLO1	**PLO2**	**PLO3**	**PLO4**	**PLO5**	**PLO6**	**PLO7**	**PLO8**	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**	**PSO6**
CLO1	1	1	1	2	2	1	1	1	2	1	1	1	2	1
CLO2	1	1	1	1	1	2	2	1	1	1	1	1	1	1
CLO3	1	1	1	2	1	1	1	1	1	2	2	1	2	1

Detailed Syllabus

UNIT-I

8 hours

Define **communication.**
Exhibit professional behaviors in communicating with patients in special situations
At the completion of this unit, the paramedic student will be able to integrate the physiological, psychological, and sociological changes throughout human development with assessment and communication strategies for patients of all ages.
Value the uniqueness of infants, toddlers, pre-school, school aged, adolescent, early adulthood, middle aged, and late adulthood physiological and psychosocial characteristics.
Human behavior:
Response mechanism interaction with environment
Motives, drives and needs:
Definition and classification of motives
Importance and purposes of motives
Motivation at work, personal and social level
Fundamental and physiological drives
Needs and determiners of behavior & Basic needs of an individual

UNIT-II

8 hours

Service Excellence:
Grooming Skills
Personal Hygiene
Handling Violence & Aggression
Complaint Management
Service behavior
Care and Empathy
Team Work
Explanation of Team Work
Importance of Team work

UNIT-III

9 hours

Common Mental Health Related Problems
Anxiety Disorder
Mood Disorders
Schizophrenia
Community Mental Health
Education for mental health and its significance
Community Mental Health programs
Formation and change of attitudes – Their nature and function

UNIT-IV

5 Hours

Psychological reaction to illness:
Attitude to illness (acute, recurrent, chronic, terminal, invalidating)
Psychological aspects of hospitalization – Attitude to treatment
Interpersonal relations in a hospital – hospital as a social institution

Teaching-Learning Strategies
Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.
Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.
Different assessment scales is used like internal assessment, external assessment, seminars and different type of quiz

Book Reference

1.Fundamental of clinical communication (Prof Vinod K Paul) Arya publishing company

ASSESSMENT
Different assessment scales are used like internal assessment, external assessment, seminars.
Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)
Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)

Course Code: BEMT-203 (Theory) & BEMT-205 (Practical)

Title of the Course Emergency Diagnostic Measures

L-30

P-20

Credits- L-2, P-1

COURSE OUTCOMES (COs)

After completing this Course, the students should be able to

- CLO-1-Have an understanding of the indications, contraindications, equipment required and technique for various commonlyperformed procedures
- CLO-2- Perform and adequately interpret diagnostic studies (EKG, radiologic studies, laboratory studies) in the Emergency Department.

Mapping of Course Outcomes (COs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	**PLO2**	**PLO3**	**PLO4**	**PLO5**	**PLO6**	**PLO7**	**PLO8**	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**	**PSO6**
CLO1	1	1	1	2	2	1	1	1	2	1	1	1	2	1
CLO2	1	1	1	1	1	2	2	1	1	1	1	1	1	1

DETAILED SYLLABUS

UNIT-I

11Hours

Blood Investigations-
Collection of samples, labeling, Normal values and interpretation of abnormal values
Hb, TLC, DLC, Complete blood count
Dipstick test for glucose, Ketones and protein, Microalbuminuria
Random blood glucose level & Fasting blood glucose
Cardiac markers- CK-MB, Troponin
Serum Creatinine level
LFT, KFT
Urinalysis

UNIT-II

8hours

ECG,
Interpretation- Measurements, Rhythm analysis, Conduction analysis.
Waveform description, ECG Interpretation
Comparison with previous ECG
X –ray
Preparation, Positions
For Chest, Abdomen, Fractured bones etc
Scans
Patient Preparation for

Coronary Angiography / Arteriography & CT Scans / CAT Scans (Computed Tomography/Computed Axial Tomography)
EKG (Echocardiograph) & Endoscopic Images
MRA (Magnetic Resonance Angiography)
MRI (Magnetic Resonance Imaging)
PET Scans (Positron Emission Tomography),
Single Image X-rays & Ultrasound

In cardiac Patients

Intra Arterial Pressure
CVP
Noninvasive pressure monitoring
Pulmonary wedge pressure
IABP

In Neurological Conditions

ICP
EEG
EMG
ECHO

UNIT-III

11hours

Biomedical equipments – Setting, calibration, operation, monitoring, and solving minor problems

- ECG machines
- Multi para Patient Monitors
- Pulse Oximeter with sensor
- Infusion Pump
- Syringe Infusion Pumps
- Defibrillator
- Transport Ventilator
- Ventilator
- CPAP VENTILATOR
- EXTERNAL PACEMAKER
- AED (Automatic External Defibrillator)
- BP Apparatus
- Laryngoscope
- Otoscope
- Portable Autoclave
- Portable Suction apparatus
- Oxygen cylinders
- Oxygen regulators
- Oxygen Flow meter
- ABG Machine
- Thermometers
- Glucometers
- End Tidal Co2 Monitors
- Tourniquets

BEMT-205, EMERGENCY DIAGNOSTIC MEASURES (Practical)
Practical based on the topics mentioned in the theory syllabus
Demonstration in ward, field and lab

Teaching-Learning Strategies
Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.
Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.
Different assessment scales is used like internal assessment, external assessment, seminars and different type of quiz.

Book References:

1. ECG Made Easy (John Hampton) 9th Edition (Elsevier)
2. Textbook of Radiology for resident & Technicians (Satish K Bhargava) CBS publication
3. Nancy Caroline's Emergency care in streets (7th Edition) AAOS publication
4. Advanced Emergency care and transportation of the sick and injured (2nd Edition) AAOS publication

ASSESSMENT
Different assessment scales are used like internal assessment, external assessment, seminars.
Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)
Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)

SEMESTER-III

Course Code: BEMT-301(Theory) BEMT-304 (Practical)

Title of the Course PHARMACOLOGY

L-30

P-20

Credits- L-1, P-1

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to

- CLO-1-The student will be able to understand and report the clinical applications, side effects and toxicities of drugs used in medicine. The student will
- CLO-2-To understand pharmacological principles into clinical decision-making.
- CLO-3-Remember the mechanisms of action and pathology ofethanol and drugs of abuse.

Mapping of Course learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CLO1	1	3	1	2	2	1	1	1	2	1	3	1	2	1
CLO2	2	3	1	1	1	2	2	1	1	1	3	1	1	1
CLO3	1	3	1	2	1	1	1	1	1	2	3	1	2	1

DETAILED SYLLABUS

This course introduces the students to basic pharmacology of common drugs used and their importance in the different treatments.

UNIT-I

10 hours

Paramedic's responsibilities and scope of management pertinent to the administration of medications
Terminology
Classification of drugs
Principles of drug administration and routes of administration
Drug allergy and toxicity, mechanism of drug action (various ways in which they act)

UNIT-II

10hours

Definition, actions, indications, and contraindications, adverse reactions of the following (in brief):-
Drugs acting on autonomous nervous system; stimulating and inhibiting, cholinergic and adrenergic
Drugs acting at neuromuscular junction and other muscle relaxants
Cardiovascular drugs – enumerate the mode of action, side effects and therapeutic uses of the following drugs

Antihistamines and Ant emetic
Analgesics

Drugs acting on CNS: Alcohol, Sedatives, Hypnotics, Anticonvulsants, Psychotherapeutics, Stimulants.

UNIT-III

10hours

Special consideration in drug treatment with regard to pregnant, pediatric and geriatric patients

Venous Access and Medication Administration:

Mathematical principles
Mathematical equivalent

Basic principles of mathematics to the calculation of problems associated with medication dosages.

Different dosage forms of oral medications

Equipment needed and general principles of administering oral medications

Indications, equipment needed, techniques used, precautions, and general principles of administering medications by:-

Inhalation route
Gastric tube
Rectal medication administration

BEMT 304, PHARMACOLOGY

Practical based on the topics mentioned in the theory syllabus

Demonstration in labs and wards

20 hours

Teaching-Learning Strategies

Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.

Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.

Different assessment scales is used like internal assessment, external assessment, seminars and different type of quiz.

Book References:

1. Essential of Medical Pharmacology K.D. Tripathi (8^{th} Edition)

ASSESSMENT

Different assessment scales are used like internal assessment, external assessment, seminars.

Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)

Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)

Course Code: BEMT-302 (Theory) & BEMT-304 (Practical)

Title of the Course MEDICINE-1

L-30

P-50

Credits- L-1, P-2

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to

- CLO-1- Undertand an accurate and complaint directed medical history and perform a physical examination for each patient encountered
- CLO-2- Perform and adequately interpret diagnostic studies used in the Emergency Department

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CLO1	1	1	1	2	2	1	1	1	2	1	1	1	2	1
CLO2	1	1	1	1	1	2	2	1	1	1	1	1	1	1

BEMT 302, MEDICINE-I

UNIT-I

10 hours

Respiratory Emergencies

Patho-physiology of respiratory emergencies related to ventilation, diffusion, and perfusion, obstructive airway disease, pneumonia, adult respiratory distress syndrome, pulmonary thromboembolism, upper respiratory infection, spontaneous pneumothorax, hyperventilation syndrome.

Airway obstruction and management

Advanced airway management- Orotracheal intubation- Procedure, List the equipments required, Complications

Cardiovascular Emergencies- Content

Signs and symptoms, and emergency management of cardio vascular diseases-cardiac arrest, arrhythmias, heart blocks, DVT, Pulmonary embolism, coronary artery diseases

Interpretation of ECG

BCLS

UNIT-II

10hours

Neurological Emergencies-

Pathophysiological changes in the nervous system that may alter cerebral perfusion pressure. The assessment of a patient with a nervous system disorder

specific management techniques for each of the following neurological disorders:

- Coma- GCS, S/S of altered levels of consciousness & care of unconscious patients.
- Stroke and Intracranial hemorrhage.
- Seizure disorders & Headache.

- Brain abscess and degenerative neurological diseases.

Review of Head injury- Mechanism of injury, Hematomas, Increased ICP & Management.

Endocrine Emergencies

Pathophysiology, signs and symptoms, patient assessment & management of

- Diabetes and diabetic emergencies like hypoglycemia.
- Diabetic ketoacidosis, and hyperosmolar hyperglycemic Non ketotic Coma
- Thyroid gland disorders, Cushing's syndrome and Addisons disease.

Allergic reaction and normal Immune response

Pathophysiology, Signs and symptoms and Management of Local Allergic reactions

Allergens associated with anaphylaxis.

UNIT-III

10 hours

Medical Emergencies- Abdominal organs

Pre-hospital assessment and pre-hospital management techniques for a patient with abdominal pain, Signs and symptoms, complications & pre-hospital management for the following Gastro-intestinal disorders:

- Gastroenteritis & Gastritis
- Colitis
- Diverticulitis & Appendicitis
- Peptic ulcer disease
- Bowel Obstruction
- Corn's disease & Pancreatitis
- Esophagic varices & Hemorrhoids
- Cholecystitis

Acute hepatitis

BEMT 305, MEDICINE-I (Practical)

Practical based on the topics mentioned in the theory syllabus

Demonstration in ward and field

50 hours

Teaching-Learning Strategies

Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.

Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.

Different assessment scales is used like internal assessment, external assessment, seminars and different type of quiz.

Book Reference:

1. Current Medical Diagnosis and Treatment 2021 (McGrawHill Lange)

ASSESSMENT

Different assessment scales are used like internal assessment, external assessment, seminars.

Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)

Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)

Course Code: BEMT-303 (Theory) & BEMT-306 (Practical)

Title of the Course MEDICINE-2

L-30

P-50

Credits- L-1, P-2

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to

- CLO-1- Remember differential diagnosis for Emergencies medical conditions which is commonly encountered in Emergency roomand in pre-hospital setup
- CLO-2-Perform a fund of knowledge and basic understanding of pathophysiologic principles of disease and apply this knowledge appropriately to each clinical encounter.

Mapping of Course Learning Outcomes (COs) with Program learning Outcomes (POs) and Program Specific Outcomes (PSOs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CLO1	1	1	2	2	2	1	1	1	2	2	3	1	2	1
CLO2	1	1	2	1	3	2	2	1	1	1	3	3	1	1

BEMT 303, MEDICINE-II
MM Theory-100 (75+25)

UNIT-I

10hours

Medical Emergencies of the Urinary System

Pathophysiology, signs and symptoms, assessment and pre-hospital management of the patient with:

- Urinary Retention & Urinary Tract Infection
- Pyelonephritis & Urinary calculus
- Epididymitis & Testicular torsion.

Physical examination, Pre-hospital management for patients with Genitourinary disorders, Acute and chronic renal failure

Dialysis and emergent conditions associated with it, including pre-hospital management

Poisoning/ Overdose

Definition of poisoning, general principles for assessment and management of the patient who has ingested poison, Physical and chemical properties influence the effects inhaled toxins.

Three categories of inhaled toxins: simple asphyxiates, chemical asphyxiates and systemic poisons, and irritants or corrosives

General principles of managing the patient who has inhaled poisons & drug overdose.

Signs, symptoms, and management of patients who have inhaled cyanide, ammonia or hydrocarbon, injected with poison by insects, reptiles, and hazardous aquatic creatures, organophosphate or carbonate poisoning

UNIT-II

10 hours

Environmental Emergencies

The risk factors, pathophysiology, assessment findings and management of:

- Specific hyperthermia conditions.
- Drowning and near drowning.
- Specific Hypothermic conditions and Frostbite.
- Diving emergencies and high altitude illness.

Mechanical effects on the body based on knowledge of basic properties of gases.
General public health principles relative to infectious diseases
The chain of elements necessary for an infectious disease to occur
Internal and external barriers affecting susceptibility to infection
The four stages of infectious diseases: the latent period, the incubation period, the communicability period, and the disease period.
The mode of transmission, pathophysiology, pre-hospital considerations, and personal protective measures to be taken for HIV, Hepatitis, tuberculosis, meningococcal meningitis, and pneumonia, rabies & tetanus.

UNIT-III

5 hours

Behavioral Emergency-

Potential causes for behavioral and psychiatric illness.
Effective techniques for interviewing a patient during a behavioral emergency
Factors to be considered & appropriate interview questions to determine suicidal intent
Assessment of potentially violent patient & measures used to safely diffuse a potentially violent patient situation.
Situations when patient restraint can be used & Key principles in patient restraint.
Safety measures to be taken when patient violence is anticipated.
Variations in approach to behavioral emergencies in children and adult
Signs, symptoms and management of alcohol related emergencies.
Management of cases with legal implications or which require evidence preservation – sexual assault/ child rape/ elderly abuse, shooting/stabbing

UNIT-IV

5 hours

Obstetrics/ Gynecology-

Anatomical and physiological changes that occur during pregnancy
Normal and abnormal deliveries
Signs and symptoms of common gynecological emergencies
Neonatal resuscitation, newborn care and assessment
APGAR scoring
Premature infant care
Fetal monitoring

BEMT 306, MEDICINE-II (Practical)
Practical based on the topics mentioned in the theory syllabus

Teaching-Learning Strategies

Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.
Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.
Different assessment scales is used like internal assessment, external assessment, seminars and different type of quiz.

Book Reference:

1. Current Medical Diagnosis and Treatment 2021 (McGrawHill Lange)

ASSESSMENT

Different assessment scales are used like internal assessment, external assessment, seminars.
Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)
Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)

SEMESTER-IV

Course Code: BEMT-401 (Theory) & BEMT-404 (Practical)

Title of the Course TRAUMA-1

L-40

P-50

Credits- L-1, P-2

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to

- CLO-1- Learn a definition of trauma that includes systemic oppression, historical and collective trauma,and toxic stress.
- CLO-2- Understand individuals and organizations to *realize* the impact of trauma and its impacts
- CLO-3- Perform basic treatment paths to recovery, *recognize* the signs andsymptoms of trauma,

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	**PLO2**	**PLO3**	**PLO4**	**PLO5**	**PLO6**	**PLO7**	**PLO8**	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**	**PSO6**
CLO1	1	1	2	2	2	1	1	1	2	2	3	1	2	1
CLO2	1	1	2	1	3	2	2	1	1	1	3	3	1	1
CLO3	2	1	3	2	2	2	2	2	2	2	2	2	1	2

BEMT 401, TRAUMA-I

UNIT-I

12hours

At the completion of this unit, the Paramedic student will be able to integrate the principles of kinematics to enhance the patient assessment and predict the likelihood of injuries based on the patient's mechanism of injury.
Field impression and implement the treatment plan for the patient with shock or hemorrhage, soft tissue trauma, burn, facial & head trauma, thoracic, abdominal, musculoskeletal and spinal trauma.

Introduction to Trauma Management
Definition of trauma
Current Concepts in Trauma:
Principles and Development, Trauma Stress
Ideal set up of Trauma Centre – Location, Infrastructure, Resources, and Manpower etc.
Lifting, Moving, and Handling of patients with multiple Injuries
Various devices associated with moving a patient in a pre-hospital set-up

UNIT-II

15 hours

Pre hospital care – With minor and major injuries

Possible steps that EMT may take for patient survival with minor and major injury
BTLS
Introduction, Trauma Assessment, Trauma Scoring.
Shock, Signs and Symptoms, Emergency Medical Care
Chest injury, Emergency Medical care
Abdominal injuries
Amputation & Burns
Injuries to bone and joints, Rules of splinting
Spine injuries, Head Injuries

UNIT-III

13 hours

Care of unconscious patients

Steps to assess level of consciousness
Assessment of Airway, Breathing and Circulation
Maxillofacial Trauma – Emergency Medical care
Classification of facial fractures
Presentation of maxillofacial fractures

- Assessment and investigation
- Treatment of facial fractures

BEMT 404, TRAUMA-I (Practical)

Practical based on the topics mentioned in the theory syllabus

Demonstration in ward and field

50 hours

Teaching-Learning Strategies

Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.
Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.
Different assessment scales is used like internal assessment, external assessment, seminars and different type of quiz.

Book Reference:

1.Nancy Caroline's Emergency care in streets (7th Edition) AAOS publication
2.Advanced Emergency care and transportation of the sick and injured (2nd Edition) AAOS publication

ASSESSMENT

Different assessment scales are used like internal assessment, external assessment, seminars.
Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)
Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)

Course Code: BEMT-402 (Theory) & BEMT-405 (Practical)

Title of the Course PATIENT ASSESSMENT AND DRUG ADMINISTRATION-1

L-30

P-50

Credits- L-1, P-2

COURSE LEARNING OUTCOMES (COs)

After completing this Course, the students should be able to

- CLO-1-Learn and undertsand appropriate patient assessments before medication administration.
- CLO-2-The purpose of the assessment is to remember if the patient's drug-related needs are being met and if any drug therapy problems are present.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CLO1	1	1	2	2	2	1	1	1	2	2	3	1	2	1
CLO2	1	1	2	1	3	2	2	1	1	1	3	3	1	1

BEMT 402, PATIENT ASSESSMENT & DRUG ADMINISTRATION-I
UNIT-I

20 HOURS

Perform equipment/vehicle checks and any other preparatory tasks
Performing equipment/vehicle checks and preparatory tasks
Steps and importance of Equipment checks

Communication:
The proper sequence of patient information
How to communicate with a patient, patient's family, bystanders, individuals with other agencies while providing patient care
The importance of effective communication of patient information in the verbal report, essential components of verbal report and written communication
How to make pre hospital report of patient care
How to make a brief, organized report to an ALS provider arriving at an incident scene

UNIT-II

20 HOURS

Perform the phases of patient assessment:
Initial Assessment: The general impression of the patient to determine priority of care
Assessment of the mental status, grading of levels of mental status
Assessment of Patient's airway, Breathing & Circulation

Arrangement needed for Airway Management.
Manual techniques, Oropharyngeal airways
Nasopharyngeal airways, Oropharyngeal suctioning, Perform Respiratory Support
Oxygen administration, Bag valve mask ventilation Demand valve resuscitators

Identify Priority Patients-
Consider,
Poor general Impression
Unresponsive patients – no gag or cough
Responsive, not following commands
Difficulty breathing
Shock (hypoperfusion)
Complicated childbirth
Chest pain with BP<100 systolic
Uncontrolled Bleeding
Severe pain anywhere

BEMT 405, PATIENT ASSESSMENT & DRUG ADMINISTRATION-I (Practical)
Practical based on the topics mentioned in the theory syllabus
Demonstration in ward and field

Teaching-Learning Strategies
Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.
Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.
Different assessment scales is used like internal assessment, external assessment, seminars and different type of quiz.

Book Refrence:
1.Nancy Caroline's Emergency care in streets (7^{th} Edition) AAOS publication
2.Advanced Emergency care and transportation of the sick and injured (2^{nd} Edition) AAOS publication

ASSESSMENT
Different assessment scales are used like internal assessment, external assessment, seminars.
Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)
Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)

Course Code: BEMT-403 (Theory) & BEMT-406 (Practical)

Title of the Course PATIENT ASSESSMENT AND DRUG ADMINISTRATION-2

L-30

P-50

Credits- L-1, P-2

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to

- CLO-1-Understand how to assess the patient prior to administering medications to ensure the patient is receiving the correct medication, for the correct reason, and at the correct time.
- CLO-2- To remember right drug is being given to the right patient at the right time for the right reason.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	**PLO2**	**PLO3**	**PLO4**	**PLO5**	**PLO6**	**PLO7**	**PLO8**	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**	**PSO6**
CLO1	1	1	2	2	2	1	1	1	2	2	3	1	2	1
CLO2	1	1	2	1	3	2	2	1	1	1	3	3	1	1

DETAILED SYLLABUS

BEMT 403, PATIENT ASSESSMENT & DRUG ADMINISTRATION-II

UNIT-I

9 hours

Observation and assistance in cardiac resuscitation:

Functioning of AED

Importance of observation and assistance in trauma resuscitation with the use of the Automatic External Defibrillator (AED)

Focused Assessment:

Focused History and Physical Examination – Trauma

Ongoing Assessment – to make general impression of the patient, repeated

Initial assessment

Reassessment of mental status, Airway, Breathing – rate, quality, Skin color, vital signs

Reestablish patient's priorities, reassessment of patient complaint or injuries.

Checking Interventions – Adequacy of Oxygen delivery/artificial ventilation.

Management of bleeding, adequacy of other interventions

Reconsider Mechanism of injury – significant mechanism of injury, infant and child consideration.

Focused assessment on the specific injury site

Baseline vital signs

Assessment of Patient's Circulation:

Assess pulse, Blood pressure, Skin.

Assess for bleeding
Assess capillary refill in infants and child patient.

UNIT-II

8 hours

Rapid Trauma Assessment:
Assess the head, Neck, cervical spine, chest, Abdomen.
The spine, Pelvis & all four extremities – Inspect, and palpate for injuries or signs of injuries – i.e. Deformities, contusions, abrasions, punctures or penetrations, burns, tenderness, lacerations, swelling, distal pulse etc.
Focused History and Physical Examination – Medical:
Assess History of Present illness
Assess sample history
Perform rapid assessment
Unresponsive Medical patients
Assessing a specific chief complaint, difference in assessing a patient with altered mental status
And other responsive patients

Detailed Physical Examination:
Patient and injury specific
Detailed physical examination to gather additional information-Inspect, palpate.
Look and feel for the following examples of injuries or signs of injury – Deformities, Contusions, Abrasions, Punctures/Penetrations, Bleeding, Burns, Tenderness, Lacerations, Swelling, any drainage, Odors, Discoloration, Foreign bodies,
Repentance, Paradoxical motion, Breath sounds, Motor functions.

UNIT-III

7 hours

Assessment of patients with behavioral emergencies:
Suicidal behavior
Hostile/violent behavior
Acute grief or depression
Paranoia & Hysterical conversion
Acute anxiety/agitation
Schizophrenia
Anger & Confusion
Fear & Hyperactivity
Alcohol and drug abuse
Other behavioral cases which are safely available
Other behavioral cases which are safely available

UNIT-IV

6 hours

Assessment of Cases with Legal Implications or which require evidence Preservation:
Sexual assault/rape
Child/elderly abuse
Shootings/stabbing
Animal bites
Other cases as available
How to go about

- **Presumed dead on arrival**
- **Do not resuscitate**

Venous Access and Medication Administration:
Temperature readings between the Centigrade and Fahrenheit scales
Indications, equipment needed, technique used, precautions, and general principles of
Peripheral venous or external jugular cannulation
Intraosseous needle placement and infusion
Medical asepsis and the differences between clean and sterile techniques
Use of antiseptics and disinfectants

BEMT 406, PATIENT ASSESSMENT & DRUG ADMINISTRATION-II (Practical)
Practical based on the topics mentioned in the theory syllabus
Demonstration in ward and field

Teaching-Learning Strategies
Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.
Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.
Different assessment scales is used like internal assessment, external assessment, seminars and different type of quiz.

Book Refrence:
1.Nancy Caroline's Emergency care in streets (7^{th} Edition) AAOS publication
2.Advanced Emergency care and transportation of the sick and injured (2^{nd} Edition) AAOS publication

ASSESSMENT
Different assessment scales are used like internal assessment, external assessment, seminars.
Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)
Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)

SEMESTER-V

Course Code: BEMT-501 (Theory) & BEMT-504 (Practical)

Title of the Course TRIAGING

L-30

P-50

Credits- L-1, P-2

COURSE LEARNING OUTCOMES (COs)

After completing this Course, the students should be able to

- CLO-1- To learn how accurate triage decision should be made and allocation for patients to receive emergency service in the best suitable time according tothe severity of their condition
- CLO-2-Remember the function of the triage Prehospital and in a hospital is to identify and prioritize those with the most urgent needs touse the emergency service first.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CLO1	1	1	2	2	2	1	1	1	2	2	3	1	2	1
CLO2	1	1	2	1	3	2	2	1	1	1	3	3	1	1

BEMT 501, TRIAGING
MM Theory-100 (75+25)

UNIT-I

10 hours

Introduction to triage
General Principles of triage

- Function of triage
- The triage assessment
- Safety at triage
- Time of treatment – Arrival time
- Time of medical assessment and treatment, waiting time

Re- triage
Documentation Standards in triage
Specific Conventions in triage

- Pediatrics
- Trauma
- Behavioral disturbance
- New model of triage in an aged person's mental health service.

Triage category and clinical descriptors.
Category – 1 (Immediate Simultaneous Assessment and Treatment)
Category – 2 (Assessment and Treatment with in 10 min)

Category – 3 (Assessment and Treatment start with in 30 min).
Category – 4 (Assessment and Treatment start with in 60 min).
Category – 5 (Assessment and Treatment start with in 120 min)

Types of triage
- Simple Triage and Rapid Treatment
- Simple triage and evacuation
- Advanced triage
- Disaster First Aid (DFA) and advanced triage

UNIT-II

10 hours

Mass casualty incident triage system
Introduction and Goals of MCI triage
MCI triage considerations for hospitals
Problems with MCI Triage
Operational Difficulties with MCI Triage
Mobile Decision Support for Triage in Emergency
- Introduction
    - Decision Support in Medical Care
    - Mobile decision support for triage
- Rule based reasoning
- Quality of triage decision

UNIT-III

10 hours

CATSM (Comprehensive Acute Traumatic Stress Management)
Introduction:
What is traumatic stress and who experiences traumatic stress?
Is traumatic stress usually caused by "severe" events?
What factors influence how people respond to traumatic events?
What reactions are typically exhibited *during* traumatic exposure?
- Emotional Responses
- Cognitive Responses
- Behavioral Responses
- Physiological Responses
- Spiritual Responses

How can *we* address traumatic stress?
Comprehensive Acute Traumatic Stress Management
What is Comprehensive Acute Traumatic Stress Management?
Why does Comprehensive Acute Traumatic Stress Management utilize stages?
How do you help someone when time is limited?
Where does confidentiality fit in?
How can we help grieving individuals?
Practical guidelines for assisting the grieving individual
The Application of Acute Traumatic Stress Management within Organizations
Organizational Impact
The Three Phases of CATSM

- Planning
- Engagement
- Disengagement

Informational Supportive Briefing (ISB)
Family Support

SAVE (Secondary assessment of victim endpoint)

BEMT 504, TRIAGING (Practical)
Practical based on the topics mentioned in the theory syllabus

Teaching-Learning Strategies
Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.
Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.
Different assessment scales is used like internal assessment, external assessment, seminars and different type of quiz.
Books for Reference:
1.Nancy Caroline's Emergency care in streets (7^{th} Edition) AAOS publication
2.Advanced Emergency care and transportation of the sick and injured (2^{nd} Edition) AAOS publication
3.Comprehensive acute traumatic stress management (Mark D. Lerner)

ASSESSMENT
Different assessment scales are used like internal assessment, external assessment, seminars.
Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)
Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)

Course Code: BEMT-502 (Theory) & BEMT-505 (Practical)

Title of the Course TRAUMA-2

L-30

P-50

Credits- L-2, P-1

COURSE LEARNING OUTCOMES (CLOs)

After completing this Course, the students should be able to

- CLO-1- Knowledge in policies, procedures and practices uses the Standards of Practice to define benchmarks for planning and monitoring the progress of TIC, training andworkforce development.
- CLO-2- To perform the Standards of Practice which are used to create standards for planning and assessing the success of TIC, training, and workforce development.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	**PLO2**	**PLO3**	**PLO4**	**PLO5**	**PLO6**	**PLO7**	**PLO8**	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**	**PSO6**
CLO1	1	1	2	2	2	1	1	1	2	2	3	1	2	1
CLO2	1	1	2	1	3	2	2	1	1	1	3	3	1	1

DEATAILED SYLLABUS

Bleeding and BEMT 502, TRAUMA-II

UNIT-I

10Hours

Concepts of Initial, Surgical, Intensive care, Critical Care transfer

Musculoskeletal trauma:

Skeletal Fractures
Principles of management of fractures
Common fractures and joint injuries, Management of joint injuries
Fracture – Upper limb, Trunk, pelvis and vertebral column.
Complications of fractures
Recognize and evaluate mechanisms of injury (Scans F 10)
Assisting in the treatment of Trauma Cases
Perform bleeding control & dress and bandage wounds.
Perform musculoskeletal immobilization & Application of traction splint
Assist with spinal immobilization
Penetrating wounds of chest and abdomen
Apply Pneumatic Anti-Shock Garment.

UNIT-II

5 hours

Soft Tissues Injuries and disorders:

Layers of the skin & Types of closed and open soft tissue injuries

Nature and mechanism of soft tissue injury
Management of soft tissue injuries & the emergency medical care considerations for a patient with a penetrating chest injury
Bandaging and Splinting, Traction and Splinting, Spinal Immobilization
Functions of Muscular System
Reasons for splinting, general rules of splinting
Complications of Splinting
Signs and Symptoms of Potential Spine Injury
Stabilization of cervical spine
Airway emergency medical care techniques for a patient with suspected spine injury

UNIT-III

5 hours

Shock:
Types of bleeding, External Bleeding – Severity & Emergency medical care
Methods to control external bleeding & Special areas (bleeding from the nose, ears, or mouth)
Internal Bleeding – severity, relationship to mechanism of injury
Signs and symptoms of internal bleeding, Emergency Medical Care
Shock: Severity, signs and symptoms of shock, Emergency medical care.

UNIT-IV

10 hours

Traumatic Wounds:
Principles of wound management
Gunshot and blast injuries Stab wounds and its management
Burns:
Layers of skin
Classification of Burns
Pathophysiology of Burns
Initial assessment and management of Burns
Treatment including secondary surgery
Burns of special areas (i.e. face, eyes, hands, perineum)
Trauma to the eye
Common eye infections

BEMT 505, TRAUMA-II (Practical)
Practical based on the topics mentioned in the theory syllabus

Teaching-Learning Strategies

Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.

Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.

REFRERENCES

1.Nancy Caroline's Emergency care in streets (7^{th} Edition) AAOS publication

2.Advanced Emergency care and transportation of the sick and injured (2^{nd} Edition) AAOS publication

ASSESSMENT

Different assessment scales are used like internal assessment, external assessment, seminars.

Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)

Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)

Course Code: BEMT-503 (Theory) & BEMT-506 (Practical)

Title of the Course AMBULANCE FIELD OPERATION

L-30

P-50

Credits- L-2, P-1

COURSE LEARNING OUTCOMES (COs)

After completing this Course, the students should be able to

- CLO-1-Learn objective for this subject is to know how to operate the emergency vehicle and what are the local protocols. And the privileges an ambulance operator have plus how to extricate and rescue patients from hazards.
- CLO-2-how to operate an emergency vehicle and what local protocols to follow. Also included are the rights and responsibilities of an ambulance driver, as well as how to remove and rescue patients from dangerous situations.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CLO1	1	1	2	2	2	1	1	1	2	2	3	1	2	1
CLO2	1	1	2	1	3	2	2	1	1	1	3	3	1	1

DETAILED SYLLABUS

BEMT 503, AMBULANCE FIELD OPERATIONS

UNIT-I

10-hours

Ambulance Call Tracking

- Medical equipment needed to attend a call.
- Nonmedical equipment needed to attend a call.
- List of phases of an ambulance call.
- Preparation for the call
- Personnel
- Daily Inspection – Inspection of vehicle system, equipments, Dispatch
- En route
- What information is essential in order to respond to a call.
- Various situations that may affect response to a call.
- What is essential for completion of a call.

Driving the ambulance

- Emergency vehicle operations
- Characteristics of good ambulance operators
- How to assess specific equipment need
- Positioning the unit – for safety, to exit the scene
- Arrival at scene, size up, scene safety

- Assessment of Mechanism of injury / nature of illness

UNIT-II

5hours

Gaining Access

- Fundamentals of Extrication
- Rescue EMS
- Equipment
- Personal safety
- Patient safety
  - Getting to the patient
- Simple Access
- Complex Access
- Removing the patient

Pre hospital Emergency Care

- Pre hospital Care Protocols and Standing Orders
- Various methods of moving a patient to the unit based upon injury or illness.
- Transferring the patient to the ambulance
- Critical interventions
- Check dressings and splints
- Procedures during En route to the receiving facility
- At receiving facility
- Components of the essential patient information in a written report.
- Maintenance of Records and Report

UNIT-III

5 hours

General Provisions of state laws relating to the operation of the ambulance Privileges in any or all of the following categories.

- Speed
- Warning Lights
- Sirens
- Right -0f – Way
- Parking
- Turning
- Procedures at red lights, stop lights and intersections

Contributing factors to unsafe driving conditions
Post run procedures – Refuel unit, file reports, etc

UNIT-III

10 hours

The preparation of the unit for the next response
Cleaning, Disinfection and Sterilization
High level disinfection and Sterilization

- How to clean or disinfect items following patient care.

Air Medical Consideration

- Utilization
- Landing Zones
- Safety

UNIT-IV

Operations over view

- EMT's role during a call involving hazardous materials
- What the EMT should do if there is reason to believe that there is a hazard at the scene
- The steps to approaching a hazardous situation.
- Various environmental hazards that affect EMS
- The criteria for multiple – casualty situation
- The actions that an EMT should take to ensure bystanders' safety

BEMT 506, AMBULANCE FIELD OPERATIONS (Practical)
Practical based on the topics mentioned in the theory syllabus
Demonstration in ward and field

Teaching-Learning Strategies
Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.
Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.

REFRERENCES
1.Nancy Caroline's Emergency care in streets (7th Edition) AAOS publication
2.Advanced Emergency care and transportation of the sick and injured (2nd Edition) AAOS publication

ASSESSMENT
Different assessment scales are used like internal assessment, external assessment, seminars.
Max Marks Theory-100 (External Assessment 75+Internal Assessment 25)
Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)

SEMESTER-VI

Course Code: BEMT-601
Title of the Course Dissertation & Viva-Voice
Credits-5

COURSE LEARNING OUTCOMES (COs)

After completing this Course, the students should be able to

- CLO-1- Students select a topic and do research on it and make results and conclusion out it whichmay benefit the institution/hospitals.

Mapping of Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs) and Program Specific Outcomes (PSOs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CLO1	1	1	2	2	2	1	1	1	2	2	3	1	2	1

Teaching-Learning Strategies
Typical teaching is giving lectures to large groups of students, followed by tutorials and workshops, as well as some individual study.
Other delivery methods that can be highly effective, and you may have heard of concepts like flipped classroom and problem-based learning.

ASSESSMENT
Different assessment scales are used like internal assessment, external assessment, seminars.
Max Marks Practical-100 (External Assessment 75+Internal Assessment 25)