

Syllabus of Diploma in Emergency and Trauma Care Technology First Year

TEACHING AND EXAMINATION SCHEME								
S.No.	Subject	Distribution of time			Distribution of Marks			
		Hours Per Week			Exam			
		Th	PR	T	Th	PR	Viva-voce	Total
1.	Anatomy, Physiology, Pathology & Pharmacology	1	-	1	100	-	-	100
2.	Medical Emergencies I	1	-	1	100	-	-	100
3.	EMS Environment I	1	-	1	100	-	-	100
4.	Emergency in body systems	1	-	1	100	-	-	100
5.	Ambulance Simulator I	-	32	32	-	75	25	100
6.	Clinical Rotations I (Sessional)	-	-	-	-	100	-	100
	Total	4	32	36				600

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S.No.	Subject	Distribution of time			Distribution of Marks			
		Hours Per Week			Exam			
		T	PR	T	Th	PR	Viva-voce	Total
1.	EMS Environment II	1	-	1	100	-	-	100
2.	Medical Emergencies II	1	-	1	100	-	-	100
3.	Management of Medical Emer	1	-	1	100	-	-	100
4.	Awareness in Medical E	1	-	1	100	-	-	100
5.	Ambulance Inter-ship and Ambula	-	32	32	-	75	25	100
6.	Clinical Rotations II	-	-	-	-	100	-	100
	Total	4	32	36				600

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वरिष्ठ अध्यापक एवं विभागाध्यक्ष
अस्थि विभाग (यूनिट-1)
राधाई नानसिंह चिकित्सालय, जयपुर

Syllabus of Diploma in Emergency and Trauma Care Technology

FIRST YEAR

Course Components-First Year(Cognitive and Psychomotor)
Preparatory:

Preparatory:

- EMT Core Training
- EMS Systems, Roles and Responsibilities (EMT and PARAMEDIC)-The Well-Being of the Paramedic
- Illness and Injury Prevention-Medical and Legal Issues
- Ethical Issues
- Pathophysiology-Pharmacology
- Vascular Access and Medication Administration-Human Development
- Patient

Communication

Airway:

- ## - Airway Management and Ventilation Patient

Assessment:

- Patient History
 - Physical Examination-Patient Assessment
 - Critical Thinking and Clinical Decision making-Communications and Documentation
- Trauma:

Documentation Trauma:

- Trauma Systems and Mechanism of Injury-Bleeding and Shock
- Burns
- Head and Face Injuries-Spine Injuries
- Thoracic Injuries-Abdomen Injuries
- Musculo skeletal

Injuries Medical:

- Respiratory Emergencies
- Cardiovascular Emergencies-Neurologic Emergencies
- Endocrine Emergencies
- Gastrointestinal Emergencies
- Renal and Urologic Emergencies-Allergic Reactions
- Toxicology(Substance Abuse and Poisoning)-Hematologic Emergencies
- Environmental Emergencies
- Infectious and Communicable Disease-Behavioral Emergencies
- Gynecologic Emergencies-Obstetrics

-Clinical Rotations1

- ## -Ambulance Simulator1

Course Components- Second Year(Cognitive and Psychomotor)

Special Considerations:

- Neonatology-Pediatrics
- Geriatrics
- Abuse, Neglect and Assault-Patients With Special Needs
- Acute Interventions for the Chronic Care Patients

Operations:

- Ambulance Operations
- Medical Incident Command
- Terrorism and Weapons of Mass Destruction-Rescue Awareness and Operations
- Hazardous Materials Incidents-Crime Scene Awareness

Surgical Knots and Suturing Techniques:

- Basic Sterile Technique

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- Two-Handed Square Knot
- Instrument Tie Square Knot-Suture materials
- Surgical Needles
- Suturing Methods-Suture Patterns
- Removing Sutures

Sonography Ultrasound)

-Basic Operation and Interpretation AHA Basic Life Support

AHA Advanced Cardiac Life Support

AHA Pediatric Advanced Life Support

Pre-Hospital Trauma Life Support/Combat and Tactical Medicine Concepts

CEVO-Coaching Emergency Vehicle Operator (Ambulance)

Hazardous Materials Awareness

Vehicle Extrication Concepts

Technical Rescue Awareness

Clinical Rotations2

- Ambulance Ride Along/Internship Part I and Part II
- Ambulance Simulator2

Skills proficiency assessments:

EMT/Basic Core Proficiency Skills:

Baseline Vital Signs with SAMPLE history & radio report BVM ventilation—adult, child, infant

Oral suctioning—adult, child, infant

CPR—one rescuer with atleast 90% proficiency in ventilations/compressions Oxygen

administration—NC, NRB, pulse oximetry (SpO2 monitoring), and capnography (etCO2 monitoring)

Bleeding/Hemorrhage management (Quik

Clot and CAT) LSB, KED, Traction Splint

Patient Assessment: Medical Assessment Trauma Assessment

Airway Management Skills:

ETT—adult, pediatric (child

and infant) King Airway—

adult

LMA—adult

I Gel—adult and pediatric Tracheal suctioning Surgical cricothyrotomy Transport ventilator

Needle chest decompression

IV/Medication Skills:

Blood draw with vacutainer device Blood draw with butterfly

needle Blood draw with syringe/OTN catheter

IV start—peripheral

IV medication administration—piggy back in

fusion IV medication administration— 3-

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 अरिष्ठ १५०० (गुणित-१)
 सवाई मानसिंह विश्वविद्यालय, जयपुर

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Medication administration—subcutaneous, intramuscular, IV bolus, nebulizer

Advanced/Specialized Skills:

Sutures Ultrasound

Accident Vehicle Patient Extrication (AVET/PHTLS)

FIRSTYEAR-SUBJECTS DIVISION

1.	Human Systems & Assessment	P-I	Anatomy, Physiology, pathology & pharmacology
2.	Pharmacology		
3.	EMT Core Training (incl. AHABLS, CEVO, and PHTLS) EMS Environment I	P-II	EMS Environment I
4.	Shock and Fluid Therapy	P-III	Emergency in body systems
5.	Emergency Cardiac Care		
6.	Emergency Respiratory Care		
7.	Traumatology	P-IV	Medical Emergencies I
8.	Medical Emergencies I		
9.	Ambulance Simulator I + Ambulance Internship 75-25	PRS	
10.	Clinical Rotations I 100		

SECONDYEAR-SUBJECTS DIVISION:

1.	EMS Environment II	P-I	EMS Environment II
2.	ACLS, PALS, AMLS, EPC, and PHTLS (Review)		
3.	Medical Emergencies II	P-II	Medical Emergencies
4.	Wilderness and Rescue Medicine		
5.	Assessment Based Management	P-III	Management of Medical Emergencies
6.	Suture Techniques		
7.	Ultrasound (Basic)		
8.	Hazardous Materials Awareness	P-IV	Awareness in medical emergencies
9.	Technical Rescue Awareness		
10.	Clinical Rotations II	PRS	
11.	Ambulance Internship 75-25		
12.	Ambulance Simulator II		

MANUALS/BOOKS:

"Emergency-Care and Transportation of the Sick and Injured", Tenth Edition, AAOS

Emergency Medical Technician-Transition Manual, AAOS

Nancy Caroline's Emergency Care in the Streets,

AAOS, Sixth Edition Hole's Human Anatomy &

Physiology, Thirteen Edition

AHABLS for the

Health care Provider

Wilderness and Rescue Medicine, Sixth Edition, Jones &

Bartlett Learning "Basic Ultrasound" by Hylton B 'Meire and

Pat Farrant

"Surgical Knots and Suturing Techniques ", F.D. Giddings, Second Edition

FIRSTYEAR-SUBJECTS DIVISION:

EMT Core Training (incl. AHABLS, CEVO, and PHTLS)

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Basic Emergency Medical Technician Course based on "Emergency-Care and Transportation of the Sick and Injured", Tenth Edition, AAOS

✓ EMS Environment I (3)

An overview of Emergency Medical Systems in the US and around the world; focusing on professionalism, responsibility, development, improvement and community involvement; and also emphasizing the ethical and legal aspects of Emergency Medical Systems including mal practice, consent, and contracts.

Human Systems & Assessment

Patient history, charting, and physical examination skills, with emphasis on directing, defining, and describing normal and pathological human body conditions.

Shock and Fluid Therapy

Understanding and management of the body system's reaction to decreased cellular oxygenation. Body fluids, osmosis, and pathophysiology of inadequate tissue perfusion. Shock therapy and intravenous/intraosseous techniques are emphasized.

Emergency Cardiac Care

Etiology, pathophysiology, clinical features, cardiac disease processes, and assessment of patients with cardiac disorders (ACLS algorithms, skills, and techniques), with focus on the interpretation of cardiac dysrhythmia, clinical signs and symptoms of cardiac conditions, indications and administration of emergency cardiac therapy along with defibrillation, synchronized cardio version, and transcutaneous pacing skills.

Pharmacology

Clinical pharmacology, classification and use of medications. Emphasis on the proper indications, precautions, dosages, and methods/routes of administration. Includes dosage calculations, metric conversions, and infusion calculations.

Emergency Respiratory Care

Care of patients with respiratory disorders; the etiology and pathophysiology of the respiratory system, normal respiratory function and mechanics of respirations. Assessment, pathophysiology of respiratory disease, evaluation and management of respiratory distress due to medical and trauma-related problems, with emphasis on the uses and techniques of supra-glottic, endotracheal, and surgical airways.

Traumatology

Management and treatment of traumatic injuries including of tissues, musculo skeletal structures, neurologic and CNS (Central Nervous System). Anatomy and pathophysiology, assessment, and management of traumatic injuries involving these human systems (including principles of PHTLS).

Medical Emergencies I

Recognition, management, and pathophysiology of patients with medical emergencies. This module will focus mainly on diabetic emergencies, anaphylaxis and anaphylactic shock, exposure to environmental extremes, alcoholism, poisoning, acute GI problems, genital urinary problems, and medical emergencies of the geriatric population.

Clinical Rotations I

Supervised rotations through hospital clinical areas. Emphasis on airway management, IV therapy, and patient assessment skills.

Ambulance Simulator I

Introduction to *Sim-Man* (mannequin) and to the ambulance simulator; basic and intermediate scenarios, working with ALS (Advanced Life Support).

SECOND YEAR-SUBJECTS DIVISION:

EMS Environment II

Guided practice with emphasis on disaster management, MCI (Multi Casualty Incidents) & triage, EMS telemetry and communications, stress management, and emergency rescue.

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extrication techniques (applied concepts of Accident Victim Extrication Techniques and PHTLS).

Medical Emergencies II

(2)

Recognition, pathophysiology, proper implementation of protocols, and management of patients with medical emergencies. This module will include infectious disease, OB-GYN, pediatrics, and behavioral emergencies.

ACLS, PALS, AMLS, EPC, and PHTLS (Review) American Heart Association and NAEMT Wilderness and Rescue Medicine

"Wilderness and Rescue Medicine" Jeffrey E. Isaac, PA-C and David E. Johnson, MD Sixth Edition Assessment Based Management

Integrates the principles of assessment- based management. This module will emphasize general approach, assessment, differentials (diagnostics), and management priorities for patients commonly encountered by the paramedic.

Suture Techniques

"Surgical Knots and Suturing Techniques", F.D. Giddings, Second Edition, Giddings Studio Publishing, Fort Collins Colorado, 2002

Ultrasound (Basic)

Suggested manual: "Basic Ultrasound "by Hylton B' Meire and Pat Farrant

Clinical Rotations II

Supervised rotations through clinical settings. Rotations will emphasize the Emergency Department and its correlation to the Emergency Medical Services system. Labor and Delivery, New born Nursery, and ICU/CCU.

Ambulance Internship Part I

Supervised experience in the pre-hospital care setting that will help the student develop and implement the concepts and principles of the Advanced Life Support system. The student will practice skills as a team member, at Basic and Advanced EMT level, under the direct supervision of a field preceptor

Ambulance Internship Part II

Supervised experience in the pre-hospital care (ambulance), which will allow the student to apply all principles concepts, and skills learned in the classroom, at the Paramedic level. The student will practice skills as the team leader under the direct supervision of a field preceptor.

Ambulance Simulator II

Scenario based training; ALS (Advanced Life Support) performance and leadership.

Hazardous Materials Awareness

Eight contact hours training; familiarization and identification of common chemical products/hazardous materials transported via roadway, railway, and maritime routes; hazardous materials classification; personal protective equipment, decontamination process; Haz Mat Team; Emergency Response Guide.

Technical Rescue Awareness

8 contact hours of training; Accident Vehicle Extrication; Railroad/Train accidents; High Angle and Low Angle Rescue; Urban Search and Rescue.

Response to Terrorism

Incidents Awareness 4

contact hours training


Accident Victim

Extrication Techniques

12-16 contact hours

training

CEVO-Coaching Emergency Vehicle Operator (Ambulance) 10-12 contact hours of training


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