

EMT- Basic to Emergency Medical Technician Transition Course

National Emergency Medical Services Education Standards

[Author Name]



COURSE REQUIREMENTS:

[NOTE: EMT training requires simple depth and foundational of all New Education Standards]

Preparatory (80 minutes – 1 hr 20 minutes)

EMS Systems

15 min – Essential

1. More detailed discussion on patient safety issues, decreasing medical error, and required affective/behavioral characteristics

Research

5 min – Essential

1. Limited information on evidence based decision-making

Workforce Safety and Wellness

15 min – Supplemental

1. Emphasize the difference between body substance isolation and personal protective equipment
2. Brief discussion on bariatric issues, neonatal isolettes and medical restraint

Documentation

0 min – Remains the Same

1. Content changes insufficient to warrant update

EMS System Communication

5 min – Supplemental

1. Fundamental information about transferring patient care to incoming EMT's

Therapeutic Communications

15 min – Essential

1. More detailed information about improving communication with the patient

Medical/Legal Ethics

30 min – Essential

1. HIPPA (new content) – should include a State-specific discussion on privileged communications
2. Living Wills (added) and Surrogate decision makers (added)
3. Civil and criminal court cases (expanded)

Anatomy and Physiology (60 minutes)

A&P

60 min – Essential

1. The respiratory information found in the 2000 Supplemental Airway and Ventilation Module should be added; more detailed discussion on the life support chain focusing on Oxygenation, perfusion and the cellular environment.

Medical Terminology (0minutes)

Terminology

0 min - Remains the Same

1. Content changes insufficient to warrant update

Physiology (45minutes)

Physiology

45 min – Essential

1. Expanded content on respiratory dysfunction and shock

Life Span Development (5minutes)

Development

5 min -Essential

1. New content

Public Health (5minutes)

Topic

5 min - Supplemental

1. New information at this level; related to *EMS Agenda for the Future* issues

Pharmacology (15minutes)

Principles of Pharmacology

0 min - Remains the Same

1. Not applicable

Medication Administration

5 min – Supplemental

1. Five rights of medication administration

Emergency Medications

10 min – Supplemental

1. Aspirin

Airway Management, Respiration, and Artificial Ventilation (75minutes– 1 hr15min.)

Anatomy and Physiology

0 min - Remains the Same

1. Not applicable

Airway Management

30 min – Essential

1. Increased level of detail - Related variations in pediatric and geriatric patients (See Special Patient Populations Sections)

Respiration

30 min – Essential

1. Increased level of detail in Anatomy of the Respiratory System, Physiology of Respiration, Pathophysiology of Respiration, Assessment of Adequate and Inadequate Ventilation, Management of Adequate and Inadequate Respiration, and Consider Age-Related variations in pediatric and geriatric patients (see Special Patient Considerations)]

Artificial Ventilation

15 min – Essential

1. Increased level of detail in the management of inadequate ventilation, the differences between normal and positive pressure ventilation, and consider Age-Related variations in pediatric and geriatric patients (see Special Patient Considerations)]

Patient Assessment (90 minutes – 1 hour 30 minutes)

Scene Size Up

5 min – Essential

1. Re-emphasis on scene safety – Implementation of Personal Protective Equipment (PPE) and Multiple-Patient Situations,

Primary Assessment

20 min – Essential

1. New terminology- Primary Survey/Primary Assessment

History Taking

30 min – Essential

1. New terminology – Investigation of the Chief Complaint, Components of a Patient History, Current Health Status, Techniques of History Taking, Standardized Approach to History Taking, Taking History on Sensitive Topics, and Age-Related variations in pediatric and geriatric assessment and management.
2. Geriatric content added

Secondary Assessment

15 min – Essential

1. New terminology – Increased level of detail and Techniques of Physical Examination

Monitoring Devices

15 min – Essential

1. Pulse Oximetry and Non-Invasive Blood Pressure
2. As Additional Monitoring Devices Become Recognized as the “Standard of Care” in the Out-of-Hospital Setting, Those Devices Should Be Incorporated Into the Primary Education of Those Who Will Be Expected to Use Them in Practice
3. State regulatory processes may elect to expand, delete, or modify the monitor devices in this section

Reassessment**5 min – Essential**

1. Reassessment of vital signs added how and when to reassess and Age Related Considerations for Pediatric and Geriatric Assessment

Medicine (240 minutes – 4 hours)**Medical Overview****5 min – Supplemental**

1. Re-use of new assessment terminology, Major Components of the Patient Assessment, and Continued Assessment.

Neurology**15 min – Essential**

1. Stroke discussion (all new) Stroke/TIA

Abdominal and Gastrointestinal Disorders**30 min – Essential**

1. Anatomy; assessment; management; GI bleeding Define Acute Abdomen. Anatomy of the Organs of the Abdominopelvic Cavity
2. Peritonitis, Ulcerative disease and age-related variations Specific Acute Abdominal
3. Conditions. Consider Age-Related variations for pediatric and geriatric assessment and management

Immunology**10 min – Essential**

1. The term anaphylaxis did not appear in the 1994 EMT-B National Standard Curriculum. Introduction, Basic Immune System's Response to Allergens, Fundamental Pathophysiology, Assessment Findings for Allergic Reaction, Assessment Findings for Anaphylaxis and Management, Epinephrine as a Treatment for Allergic Reaction. Communication and Documentation and Transport Decisions.
2. Some geriatric information added - Age Related

Infectious Diseases**10 min – Essential**

1. Updated infectious disease information, for example methicillin-resistant
2. Staphylococcus aureus (MRSA) and Acquired Immune Deficiency Syndrome (AIDS) update; should include a discussion on cleaning and sterilizing equipment and decontaminating the ambulance Equipment and Cleaning and Disposing of Equipment and Supplies

Endocrine Disorders**10 min – Essential**

1. Increased level of detail on diabetes Introduction Diabetes

Psychiatric**15 min – Essential**

1. New material; includes new material on Agitated Delirium and Psychiatric Emergencies
2. Revised restraint techniques and Medical-Legal Considerations

Cardiovascular**60 min – Essential**

1. Increased emphasis on anatomy, physiology and pathophysiology; increased emphasis on specific cardiovascular emergencies, addition of aspirin and information for acute coronary syndrome Anatomy of the Cardiovascular system, Physiology, Pathophysiology, Assessment, Management (refer to the American Heart Association Guidelines), and Consider Age-Related

Toxicology**5 min – Supplemental**

1. Poison control information included; Introduction to Drugs of Abuse, General Treatment Modalities for Poisonings, and Consider Age-Related Variations for Pediatrics and Geriatric Assessment and Management.

Respiratory**45 min – Essential**

1. Increased level of detail on respiratory distress, Anatomy of the Respiratory System, Normal Respiratory Effort, and Specific Respiratory Conditions, Metered-Dose Inhaler and Small Volume Nebulizer, and Consider Age-Related Variations for Pediatrics and Geriatric Assessment and Management.

Hematology**5 min – Essential**

1. Brief discussion of sickle cell disease-Sickle Cell Crisis and Clotting Disorders.

Genitourinary/Renal**15 min – Essential**

1. Increased level of detail-Dialysis

Gynecology**10 min Supplemental**

1. Brief discussion of sexually transmitted diseases and pelvic inflammatory disease -Specific Gynecological Emergencies– Definition, Causes, Risk Factors, Assessment Findings and Management

Non-Traumatic Musculoskeletal Disorders**15 min Supplemental**

1. New information at this level -Anatomy and physiology review and Pathophysiology

Diseases of the Eyes, Ears, Nose, and Throat

0 min - Remains the Same

1. Not applicable

Shock and Resuscitation (30 minutes)

Topic

30 min Essential

1. Shock content was moved from trauma to emphasize the fact that it occurs in contexts other than trauma; the cardiac arrest information was moved from cardiology for the same reason; brief discussion on devices to assist circulation, although subject to local protocol; shock should be taught in a more comprehensive context rather than simply as a consequence of bleeding

Trauma (220 minutes 3 hours 40 minutes)

Trauma Overview

45 min – Essential

1. Field Triage Decision Scheme added. Shock and Identification
2. <http://cdc.gov/fieldtriage> contains the National Trauma Triage Protocols and additional instructional materials.

Bleeding

0 min - Remains the Same

1. Content changes insufficient to warrant update

Chest Trauma

30 min Essential

1. Increased level of detail-Physiology, Pathophysiology of Chest Trauma

Abdominal and Genitourinary Trauma

15 min Essential

1. Increased level of detail-Physiology and Specific Injuries

Orthopedic Trauma

0 min - Remains the Same

1. Content changes insufficient to warrant update.

Soft Tissue Trauma

0 min - Remains the Same

1. Content changes insufficient to warrant update

Head, Facial, Neck and Spine Trauma

10 min – Essential

1. Increased level of detail– emphasize the potential harm of hyperventilation
Review of Anatomy and Physiology of the Head, Face, and Neck

Nervous System**45 min – Essential**

1. Increase emphasis on neurological assessment
General Assessment considerations for Brain Trauma Patients

Special Considerations in Trauma**45 min – Essential**

1. Pregnant patients added - Trauma in Pregnancy
2. Pediatric patients added - Trauma in the Pediatric Patient
3. Elderly patient added - Trauma in the Elderly Patient
4. Cognitive impairment added - Trauma in the Cognitively Impaired Patient

Environmental Trauma**15 min – Supplemental**

1. Increased level of detail on submersion, bites, envenomation, diving injuries and radiation exposure, Submersion Incidents, Bites and Envenomations, Diving Emergencies (Dysbarism), and Radiation

Multi-System Trauma**15 min – Supplemental**

1. Increased level of detail added – includes discussion of kinematics and blast injury Kinematics of Trauma and Specific Injuries Related to Multi-system Trauma

Special Patient Population (100 minutes – 1 hour 40 minutes)**Obstetrics****10 min – Essential**

1. More detailed discussion on complications of pregnancy; uses the terms preeclampsia, eclampsia and premature rupture of membranes (which do not require lengthy discussion). General System Physiology, Assessment, and Management. Complications of Pregnancy

Neonatal Care**0 min - Remains the Same**

1. Content changes insufficient to warrant update

Pediatrics**30 min – Supplemental**

1. Increased level of detail – **Extensive content**

Geriatrics**30 min -- Supplemental**

1. All new content – **Extensive content to cover**

Patients with Special Challenges

30 min – Supplemental

1. Elder abuse, homelessness, poverty, bariatric, more technology dependent, hospice, sensory deficit, home care, and developmental disabilities added Abuse and Neglect, Homelessness/Poverty, Bariatric Patients, Technology Assisted/Dependent, Hospice Care and Terminally, Sensory Deficits, Home care, and Patient with Developmental Disability

EMS Operations (60 minutes– 1 hour)

Principles of Safely Operating a Ground Ambulance

10 min – Essential

1. Increased depth of discussion on the risks of emergency response and leaving the scene
Risks and Responsibilities of Emergency Response

Incident Management

Co or Pre-requisite– Essential

1. ICS and federal requirements added **Establish and Work Within the Incident Management System**this can be done as a co-requisite or pre-requisite or as part of the entry level course****

Multiple Casually Incidents

10 min – Essential

1. References Centers for Disease Control (CDC) Field Triage Decision Scheme and The National Trauma Triage Protocol Triage**utilize the Florida Trauma Triage materials.**

Air Medical

10 min – Supplemental

1. New material has been added– Patient transfer issues– Interaction with Air Medical personnel, scene safety and landing zone (LZ) selection and prep– Safe Air Medical Operations Criteria for Utilizing Air Medical Response

Vehicle Extrication

10 min – Supplemental

1. Situational safety has been added **Safe Vehicle Extrication**

Hazardous Materials Awareness

Co or Pre-requisite– Essential

1. HAZWOPER (Awareness ONLY) standard added Risks and Responsibilities of Operating in a Cold Zone at a Hazardous Material or Other Special Incident (Hazardous Waste Operations and Emergency Response (HAZWOPER) standard, 29 CFR 1910.120(q)(6)(i) – “First Responder Awareness Level only] **this can be done as a co-requisite or pre-requisite or as part of the Entry Level course**

1. All new content- Risks and Responsibilities of Operating on the Scene of a Natural or Man-Made Disaster.

The following restraint technique has been determined to be harmful and is no longer permitted: forceful restraint in a prone position, with wrists and ankles tightly tied together (“hobbled”) behind the back.

SUMMARY OF PROPOSED TIME [outlined above]

Total 16 hrs 35 min

The above hours does not include time for NIMS and HAZWOPER or requirement of performance of clinical skills. If student already has these, they do not have to take them again.

HAZWOPER– Awareness	8 hrs
ICS courses	16 hrs
Skills	2 to 5 hrs

SKILL CONSIDERATIONS:

Discontinued:

- Pressure points and elevation for hemorrhage control
- Insertion of nasogastric and orogastric tubes
- Activated charcoal

New

- Use of Partial Rebreather, Simple Facemask, and Venturi Mask
- Obtaining a pulse oximetry value.
- Use of Automated transport ventilators
- Use of mechanical CPR devices (required additional training)
- Assisting a patient with his/her prescribed medications
- Administration of Aspirin by mouth
- Use of Auto-injector (self or peer)

Vertical Curriculum for the EMT-B to EMT Transition Course

Minutes Recommendation

SECTION	TOPIC	LEC	LAB	NAEMSO	RATIONALE
Preparatory	EMS Systems	15	0	15	More detailed discussion on patient safety issues, strategies to decrease medical errors, and required affective/behavioral characteristics
	Research	5	0	5	Limited information on evidence based decision-making.
	Workforce Safety and Wellness	10	0	15	Emphasizes the difference between body substance isolation and personal protective equipment. Brief discussion on bariatric issues, neonatal isolettes and medical restraint
	Documentation	0	0	0	Content changes insufficient to warrant update
	EMS System Communication	5	0	5	Fundamental information about transferring patient care to incoming EMT's.
	Therapeutic Communications	15	0	15	More detailed information about improving communication with the patient.
	Medical Legal Ethics	30	0	30	HIPPA (new content) – should include a State-specific discussion on privileged communications. Living Wills (added) and Surrogate decision makers (added). Civil and criminal court cases (expanded).
Anatomy and Physiology	Anatomy and Physiology	60	0	60	Ensuring a comprehensive and complex understanding of cardiovascular, respiratory and neurological systems.
	Physiology	45	0	45	Expanded content on respiratory dysfunction and shock
	Life Span Development	5	0	5	New content.
	Public Health	5	0	5	New information at this level; related to EMS Agenda for the Future issues.
Pharmacology	Principles of Pharmacology	15	0	15	Five rights of medication administration. Aspirin
Airway Management, Respiration & Artificial Ventilation	Airway Management, Respiration & Artificial Ventilation	30	60	90	Drug assisted intubation and mechanical ventilators new content.

Patient Assessment	Patient Assessment	30	30	60	Investigation of the Chief Complaint. Components of a Patient History. Techniques of History Taking. Standardized Approach to History Taking. Taking History on Sensitive Topics. Consider Age-Related variations in pediatric and geriatric patients.
Medicine	Immunology	20	0	20	New term of anaphylactoid introduced. Additionally discussion of transplant related problems and collagen vascular disease added.
	Endocrine Disorders	20	0	20	Discussion on long-term effects of diabetes.
	Medical Overview	30	0	30	Review of destinations decisions for some medical conditions.
	Respiratory	30	30	30	More in-depth evaluation of respiratory problems.
	Hematology	30	0	30	Section on blood transfusion reactions.
	Abdominal and Gastrointestinal	15	0	15	New section on mesenteric ischemia, rectal foreign body obstructions and renal abscess.
	Psychiatric	30	0	15	New material on excited delirium syndrome.
	Cardiovascular	45	0	45	Recognition and interventions of acute coronary syndrome to include early hospital notification with pertinent information (age, cardiologist, STEMI, etc.).
Trauma	Trauma Overview	15	0	15	New content area on trauma systems and destination triage.
	Chest Trauma	0	0	45	No new concepts or procedures.
	Head, Face, Neck and Spinal Trauma	30	0	30	Expanded knowledge on Closed head injury management with appropriate ventilation using waveform capnography.
	Multi Systems Trauma	30	0	30	Critical thinking skills emphasized. Additional information on blast injuries.
EMS Operations	Principles of Safely Operating a Ground Ambulance	0	0	10	Not needed, driving safety programs are very common for Michigan EMS services.
	Multi Casualty Incidents	20	0	10	Overview of triage scheme SALT.
	Mass Casualty Incidents Due to Terrorism and Disaster	20	0	20	Risks and responsibilities when operating on the scene of a disaster.
Special Patient Populations	Patients with Special Challenges	30	0	30	Overview of pediatrics because of low volume with potential high risk. Provide leads to pediatric specialty course (e.g. PEARS, PEPP, PALS).

	New Skills	BIPAP/CPAP, waveform capnography, monitoring and management of chest tubes, percutaneous cricothyrotomy, accessing indwelling catheters, intranasal medication, eye irrigation with Morgan lens.	60	60	??	New skills.
Removed Skills	Pressure points & elevation for hemorrhage control, Umbilical vein access, Urinary catheterization the "hobbled" restraint technique is no longer permitted.	10	735	225	800	Mention of these would be a good reminder and maybe new information.
	TOTAL MINUTES		735	225	800	
	TOTAL HOURS		12.25	3.75	13.3	
	TOTAL HOURS		16 combined			